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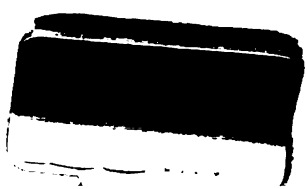


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TWENTIETH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF INDIANA

FOR THE

Fiscal Year Ending October 31, 1901, and the Statistical Year Ending December 31, 1901.

TO THE GOVERNOR.

INDIANAPOLIS:
WM. B. BURFORD, CONTRACTOR FOR STATE PRINTING AND BINDING.
1903.

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STATE OF INDIANA,
EXECUTIVE DEPARTMENT,
INDIANAPOLIS, December 10, 1902.

Received by the Governor, examined and referred to the Auditor of State for verification of the financial statement.

OFFICE OF AUDITOR OF STATE,
INDIANAPOLIS, December 10, 1902.

The within report, so far as the same relates to moneys drawn from the State Treasury, has been examined and found correct.

W. H. HART,
Auditor of State.

DECEMBER 10, 1902.

Returned by the Auditor of State, with above certificate, and transmitted to Secretary of State for publication; upon the order of the Board of Commissioners of Public Printing and Binding.

CHAS. E. WILSON,
Private Secretary.

Filed in the office of the Secretary of State of the State of Indiana, December 10, 1902.

UNION B. HUNT,
Secretary of State.

Received the within report and delivered to the printer this 10th day of December 1902.

THOS. J. CARTER,
Clerk Printing Bureau.

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MEMBERS OF THE BOARD.

J. H. Forrest, M. D., President.....Marion.
W. N. Wishard, M. D., Vice-President.....Indianapolis.
T. Henry Davis, M. D..... .....Richmond.
Clark Cook, M. D..... .....Fowler.
J. N. Hurty, M. D., Phar. D., Secretary.. .....Indianapolis.

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[Extract from Proceedings of the State Board of Health, in regular session, October 10, 1902.]

Indianapolis, October 11, 1902.

The manuscript of the Annual Report for 1901 was reviewed and discussed and finally approved and it was

Ordered, That the manuscript of the Twentieth Annual Report, as amended and approved, be sent to the Printing Board.

J. N. HURTY, Secretary.

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REPORT OF STATE BOARD OF HEALTH.

INDIANAPOLIS, IND., December 1, 1901.

HON. W. T. DURBIN, *Governor of Indiana:*

The State Board of Health herewith respectfully submits its Twentieth Annual Report. The fiscal report covers the twelve months ending October 31, 1901, and the report of the transactions of the Board, the detail account of the sanitary work done, and the vital statistics of the State are for the calendar year 1901.

RECOMMENDATIONS.

The health law requires the State Board of Health to make such recommendations as may seem desirable in the line of health legislation. In accordance with this command, we submit the following suggestions. They are not new, all having been offered before, and all of them have been proven wise economies in the experience of other states and countries.

A STATE LABORATORY OF HYGIENE.

We recommend that a laboratory be established in the State House at Indianapolis under the charge and direction of the State Board of Health, to be called "The State Laboratory of Hygiene." This laboratory would be used for making sanitary analyses necessary in the work of tracing the cause and origin of diseases, also for making examinations of diphtheria cultures, examinations of sputum, blood, etc., for the purpose of settling diagnoses, that cure and prevention may be promptly applied. A third use of the laboratory would be to make analyses of foods and drugs, which is the first step necessary in the enforcement of the pure food and drug law. A laboratory devoted to the above

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purpose should be located at Indianapolis under the charge of the State Board of Health and be presided over by skilled men who should give all of their time and energies to their work. All of the states bounding Indiana have state laboratories, and likewise, almost all of the northern and a few of the southern states. In this respect, therefore, Indiana is behind.

SANITARY SCHOOLHOUSES AND TEACHING HYGIENE IN THE PUBLIC SCHOOLS.

We suggest a statute requiring that all schoolhouses hereafter built shall conform to natural sanitary laws; also that the act should contain a clause requiring that hygiene be taught in the public schools. Not less than 10 per cent. of the school moneys are now wasted on account of unsanitary schoolhouses. Massachusetts, Michigan and other states have statutes of the character we propose, and better health and progress among the school children has thus been secured.

A STATE HOSPITAL FOR INDIGENT CONSUMPTIVES.

Massachusetts and New York have provided state hospitals for consumptives, and Ohio, Maryland, Pennsylvania, Michigan and other states are considering the matter. Both humanity and economy demand such institutions in every state. At present, fully 1,000 indigent consumptives are being cared for at public expense in Indiana, but in such a way as to spread the disease and not restore to health a single patient. The proposition to establish a State Hospital for Indigent Consumptives is not one to spend more money, but is clearly a measure to more wisely expend the money now devoted to caring for these unfortunates.

We believe that all of these recommendations are wise; and would, if put into force by the State, save money to the people and materially promote the public happiness.

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FINANCIAL STATEMENT.

RECEIPTS.

By appropriation $6,000 00

DISBURSEMENTS.

1900.		
Nov. 28.	Edward Smith, wrapping annual reports.....	$5 00
Dec. 1.	Maude Linn, clerical services.....	35 00
Dec. 1.	Maud Hoffman, clerical services.....	17 50
Dec. 1.	Ona Grube, clerical services.....	35 00
Dec. 1.	Eva D. Campbell, stenographer.....	35 00
Dec. 1.	May Stuart, clerical services.....	35 00
Dec. 3.	United Typewriter Supply Co., typewriter.....	50 00
Dec. 21.	T. Henry Davis, expenses attending Board meeting....	5 00
Dec. 21.	J. H. Forrest, expenses attending Board meeting.....	6 20
Dec. 21.	E. D. Laughlin, expenses attending Board meeting.....	11 00
Dec. 21.	Vincent Foster, postage stamps	25 00
Dec. 21.	United States Express Company, expressage.....	1 60
Dec. 21.	The Wooden Novelty Co., diphtheria outfits	16 39
Dec. 21.	Wm. B. Burford, printing and stationery.....	581 51
Dec. 21.	Wyckoff, Seamans & Benedict, repairing typewriter....	35
Dec. 21.	American Toilet Supply Co., laundry.....	2 25
Dec. 21.	Jessie Boyd, clerical services.....	16 00
Dec. 21.	The New York Store, soap.....	90
Dec. 31.	Maude Linn, clerical services.....	35 00
Dec. 31.	Ona Grube, clerical services.....	35 00
Dec. 31.	Maud Hoffman, clerical services.....	17 50
Dec. 31.	Eva D. Campbell, stenographer.....	35 00
Dec. 31.	May Stuart, clerical services.....	35 00
1901.		
Jan. 18.	May Loomis, clerical services.....	5 00
Feb. 1.	May Stuart, clerical services.....	35 00
Feb. 1.	Ona Grube, clerical services	35 00
Feb. 1.	Maude Linn, clerical services.....	35 00
Feb. 1.	Maud Hoffman, clerical services.....	17 50
Feb. 1.	Eva D. Campbell, stenographer	35 00
Feb. 1.	T. Henry Davis, expenses attending Board meeting....	5 00
Feb. 1.	E. D. Laughlin, expenses attending Board meeting....	10 45
Feb. 1.	Bowen-Merrill Co., publication	2 85
Feb. 1.	J. N. Hurty, Secretary, expenses.....	219 95
Feb. 1.	The New York Store, soap.....	97
Feb. 1.	Geo. F. McGinnis, stamps	50 00
Feb. 1.	Western Union Telegraph Co., telegrams.....	10 15
Feb. 1.	Central Union Telephone Co., rental and toll.....	31 20
Feb. 1.	New Telephone Co., rental.....	10 00
Feb. 1.	New Long Distance Telephone Co., tolls.....	4 50
Feb. 1.	Art Metal Construction Co., special case.....	74 00
Feb. 1.	United States Express Co., expressage.....	1 33

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DISBURSEMENTS—Continued.

1901.		
Feb. 1.	Dr. J. A. Egan, dues, conference State and Provincial Boards of Health	$5 00
Feb. 1.	P. Blakiston's Sons, publication	2 00
Feb. 1.	Editor Sanitarian, subscription, five copies	20 00
Mar. 1.	Eva D. Campbell, stenographer	40 00
Mar. 1.	May Stuart, clerical services	40 00
Mar. 1.	Ona Grube, clerical services	35 00
Mar. 1.	Maude Linn, clerical services	35 00
Mar. 1.	Maud Hoffman, clerical services	17 50
Mar. 13.	Geo. F. McGinnis, stamps	50 00
Apr. 1.	May Stuart, clerical services	40 00
Apr. 1.	Eva D. Campbell, stenographer	40 00
Apr. 1.	Maude Linn, clerical services	35 00
Apr. 1.	Maud Hoffman, clerical services	17 50
Apr. 17.	May Loomis, clerical services	20 00
Apr. 18.	Wm. B. Burford, printing and stationery	808 58
Apr. 18.	Bowen-Merrill Co., publication	3 00
Apr. 18.	Sander & Recker, desk and hall tree	16 00
Apr. 18.	New Long Distance Telephone Co., tolls	3 65
Apr. 18.	New Telephone Co., rental	10 00
Apr. 18.	American Toilet Supply Co., laundry	2 25
Apr. 19.	J. H. Forrest, attending Board meeting	14 10
Apr. 18.	T. Henry Davis, attending Board meeting	15 00
Apr. 19.	Western Union Telegraph Co., telegrams	7 99
Apr. 18.	Joe A. Downy, postal guide	2 50
Apr. 18.	Central Union Telephone Co., rental and toll	31 80
Apr. 18.	Phil. Med. Pub. Co., publications	3 00
Apr. 18.	Yawman & Erbe Mfg. Co., card cabinet and cards	95 00
Apr. 18.	Bausch & Lomb Optical Co., sub. journal	1 00
Apr. 18.	H. K. Mulford & Co., culture media	5 97
Apr. 24.	J. N. Hurty, Secretary, expenses	113 86
May 1.	Maud Hoffman, clerical services	20 00
May 1.	May Stuart, clerical services	40 00
May 1.	Maude Linn, clerical services	40 00
May 1.	Eva D. Campbell, stenographer	40 00
May 1.	Marietta Thompson, clerical services	35 00
May 1.	Geo. F. McGinnis, stamps	50 00
May 6.	W. N. Wishard, attending Board meeting	10 00
May 6.	T. Henry Davis, attending Board meeting	13 70
May 6.	J. H. Forrest, attending Board meeting	14 95
May 6.	Clark Cook, attending Board meeting	17 50
May 6.	Bowen-Merrill Co., one desk	37 50
May 6.	Bowen-Merrill Co., publications	6 25
May 18.	Marietta Thompson, clerical services	22 50
May 28.	T. Henry Davis, attending Board meeting	15 00
May 28.	W. N. Wishard, attending Board meeting	10 00
May 28.	J. H. Forrest, attending Board meeting	14 95
May 28.	Clark Cook, attending Board meeting	18 00
June 1.	Maude Linn, clerical services	40 00

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DISBURSEMENTS—Continued.

1901.		
June 1.	May Stuart, clerical services	$40 00
June 1.	Eva D. Campbell, stenographer	40 00
June 1.	Minnie Goeggel, clerical services	17 50
June 1.	Maud Hoffman, clerical services	20 00
June 3.	Geo. F. McGinnis, stamps	50 00
July 1.	May Stuart, clerical services	40 00
July 1.	Eva D. Campbell, stenographer	40 00
July 1.	Minnie Goeggel, clerical services	40 00
July 1.	Maud Hoffman, clerical services	20 00
July 1.	Maude Linn, clerical services	40 00
July 8.	Geo. F. McGinnis, stamps	50 00
July 12.	Central Union Telephone Co., rental and tolls	35 20
July 12.	New York Store, soap	60
July 12.	Western Union Telegraph Co., telegrams	6 84
July 12.	American Toilet Supply Co., laundry	2 25
July 12.	United States Express Co., expressage	71
July 12.	New Telephone Co., rental	10 00
July 12.	New Long Distance Telephone Co., tolls	4 60
July 12.	Wm. B. Burford, printing and stationery	274 87
July 12.	Bowen-Merrill Co., publications	4 00
July 12.	J. H. Forrest, attending Board meeting	15 00
July 12.	T. Henry Davis, attending Board meeting	15 00
July 12.	W. N. Wishard, attending Board meeting	10 00
July 12.	Clark Cook, attending Board meeting	18 50
July 12.	J. N. Hurty, Secretary, expenses	9 77
July 12.	Mary Burke East, reporting conference	25 00
Aug. 1.	Maude Linn, clerical services	40 00
Aug. 1.	Maud Hoffman, clerical services	20 00
Aug. 1.	Minnie Goeggel, clerical services	40 00
Aug. 1.	Eva D. Campbell, stenographer	40 00
Aug. 1.	May Stuart, clerical services	40 00
Aug. 5.	Geo. F. McGinnis, stamps	50 00
Sept. 1.	Minnie Goeggel, clerical services	40 00
Sept. 1.	Eva D. Campbell, stenographer	40 00
Sept. 1.	Maude Linn, clerical services	40 00
Sept. 1.	Maud Hoffman, clerical services	20 00
Sept. 1.	May Stuart, clerical services	40 00
Sept. 5.	Geo. F. McGinnis, stamps	50 00
Oct. 1.	Maud Hoffman, clerical services	20 00
Oct. 1.	Maude Linn, clerical services	40 00
Oct. 1.	May Stuart, clerical services	40 00
Oct. 1.	Eva D. Campbell, stenographer	40 00
Oct. 11.	Central Union Telephone Co., rental and tolls	19 75
Oct. 11.	New Long Distance Telephone Co., tolls	45
Oct. 11.	New Telephone Co	10 00
Oct. 11.	American Med. Pub. Co., publications	4 00
Oct. 11.	H. Sterns, soap	75
Oct. 11.	Cyrus A. Smith, culture tubes	2 50
Oct. 11.	United States Express Co., expressage	1 05

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DISBURSEMENTS—Continued.

1901.		
Oct. 11.	Smith-Premier Typewriter Co., repairs on machine.....	$0 75
Oct. 11.	American Toilet Supply Co., laundry.....	2 25
Oct. 11.	Badger Furniture Co., awning.....	4 00
Oct. 11.	Wm. B. Burford, printing and stationery.....	229 18
Oct. 11.	Western Union Telegraph Co., telegrams.....	5 77
Oct. 11.	Jas. L. Anderson, chief clerk, expenses.....	2 85
Oct. 11.	J. N. Hurty, Secretary, expenses.....	21 85
Oct. 11.	J. N. Hurty, Secretary, water analyses.....	30 00
Oct. 11.	J. N. Hurty, Secretary, expenses.....	106 24
Oct. 11.	Clark Cook, attending Board meeting.....	18 00
Oct. 11.	T. Henry Davis, attending Board meeting.....	15 00
Oct. 11.	J. H. Forrest, attending Board meeting.....	14 85
Oct. 16.	Geo. F. McGinnis, stamps.....	50 00
Oct. 24.	W. N. Wishard, attending Board meeting, American Pub. Health Association and expenses to Clay City..	48 20
Oct. 24.	Clark Cook, attending Board meeting.....	18 50
Oct. 24.	J. H. Forrest, attending Board meeting.....	18 05
Oct. 24.	T. Henry Davis, attending Board meeting.....	15 00
Oct. 24.	Smith-Premier Typewriter Co., typewriter.....	90 00
Oct. 24.	Sanborn-Marsh Electric Co., desk lamp.....	2 20
Oct. 24.	Sanborn-Marsh Electric Co., electric buzzer.....	4 78
Oct. 29.	J. H. Forrest, attending Board meeting.....	17 00
Oct. 29.	T. Henry Davis, attending Board meeting.....	14 00
Oct. 29.	Clark Cook, attending Board meeting.....	18 00
Oct. 29.	W. N. Wishard, attending Board meeting.....	10 00
Oct. 31.	May Stuart, clerical services.....	45 00
Oct. 31.	Maude Linn, clerical services.....	45 00
Oct. 31.	Eva D. Campbell, stenographer.....	45 00
Oct. 31.	Maud Hoffman, clerical services.....	25 00
Oct. 31.	J. N. Hurty, Secretary, expenses.....	18 15
Oct. 31.	Balance reverted to general fund.....	39
	Total	$6,000 00

SUMMARY.

Total receipts for year.....		$9,300 00
Secretary's salary for one year.....	$2,400 00	
Clerk's salary for one year.....	900 00	
Office appropriation	6,000 00	
Total		$9,300 00

J. H. FORREST,
President,
WM. N. WISHARD,
Vice-President,
CLARK COOK,
T. HENRY DAVIS,

J. N. HURTY, Secretary.

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MINUTES AND TRANSACTIONS

OF THE

INDIANA STATE BOARD OF HEALTH

FOR

THE FISCAL YEAR ENDING SEPTEMBER 30, 1901.

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SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., December 21, 1901.

Called to consider what legislation the Board would suggest to the Sixty-second Assembly, also to consider the charges against Dr. W. H. Fuller, Health Officer of North Vernon, Ind.

Called to order at 3 p. m.

Present: Drs. Davis, Forrest, Laughlin, Wishard and Hurty.

President Davis in the chair.

The proposed bill establishing a laboratory was considered line by line. The bill was then approved as a whole.

Ordered, A card case, two units, with cards, shall be purchased, and that the death records shall be indexed by names.

Ordered, That the Secretary of the North Vernon Board of Health, Dr. W. H. Fuller, be summoned to appear for trial at the next regular meeting in January, 1901.

Adjourned.

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FIRST QAURTER.

November and December, 1900, and January, 1901.

OFFICE INDIANA STATE BOARD OF HEALTH,

Indianapolis, Ind., December 21, 1901.

Regular quarterly meeting for quarter ending January 31, 1901.

Present: Drs. Laughlin, Wishard and Hurty.

Minutes of last meeting read and approved.

Minutes of special meeting held December 21, 1900, read and approved.

REPORT OF SECRETARY FOR THE QUARTER.

The mortality statistics were collected, tabulated and analyzed for each month, as appears in the Monthly Bulletin, which were promptly printed each month for the quarter. The correspondence increased over the preceding quarter. Nine visits were made, as follows:

November 1. Crawfordsville, on account of invitation from the local Health Officer, Dr. J. N. Taylor, and the Town Council, to advise in regard to municipal management of slaughterhouses.

November 12. Danville, on account of inspection of school children, as schools had been closed for two weeks because of diphtheria. A visit was made at the request of the School Board.

November 26. Fowler, on account of request of County Health Officer, to help inspect school, jail and courthouse and give advice.

December 1. North Vernon, on account of invitation of County Superintendent, to address the County Teachers' Institute on "School Sanitation."

December 5. Columbus, Ind., on account of invitation of School Board and local Health Officer, to inspect schoolhouses and make sanitary recommendations, and to attend the monthly meeting of the Bartholomew County Medical Society and read a paper upon "Typhoid Fever."

December 11. Richmond, on account of invitation of local Health Officer, Dr. T. Henry Davis, to make diagnosis in case of suspected smallpox.

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December 12. Greensburg, on account of invitation from School Board to make tests of the ventilation and heating of the new schoolhouse.

December 18. Vincennes, on account of summons from grand jury to give evidence in the case of the pollution of the Wabash River.

December 27. Michigan City, on account of appearance of eruptive disease among the prisoners at the Indiana State Prison.

Herewith I give in detail what was accomplished by these visits.

CRAWFORDSVILLE.

November 1. Arriving at Crawfordsville, I found the Health Officer ready to take me upon a tour of inspection of the slaughterhouses of the city. We first visited the Keller slaughterhouse. It was dilapidated, timbers were rotten and the ground upon which it stood was filthy and sodden to a very great degree. The drainage of the blood and offal was simply onto the open ground adjoining the building. Water for washing the meat was from a well situated in the slaughterhouse, from which the local Health Officer told me dead rats could be taken at any time. The odors around the slaughterhouse were very repulsive and repellent. My advice was that such a slaughterhouse was a nuisance and should be suppressed.

The next slaughterhouse visited was called the Wiel slaughterhouse. The building was badly dilapidated and vile odors were perceptible everywhere. The drainage was simply onto the surface of the back yard. Entrails and other offal were strung around promiscuously. The timbers of the building were saturated with filth. The well was beneath the floor and was badly polluted undoubtedly. It was my recommendation that the Weil slaughterhouse be condemned as a nuisance.

Fink's slaughterhouse was next visited. It was found to be dilapidated. Timbers were sodden with rottenness. Back yard was loathsome. Water was taken from a dug well, which was situated in the sodden and awful back yard.

Stout slaughterhouse. This was found to be a new house, with cement floor; water was supplied from a spring in the hillside. A back yard adjoining the building received all the offal. Putridity was everywhere discoverable in this hogyard. At all of these slaughterhouses hogs were fed on putrid offal. Returning from the inspection, I was called to meet a special session of the Council.

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The above description was given to the Council of the various slaughterhouses, and I recommended that they all be condemned as nuisances, and that a special ordinance be passed, stating specifically how all meat which was sold in Crawfordsville should be slaughtered and cared for. I have since learned that the Council has taken appropriate action and that no difficulty is being met with in securing a proper sanitary meat supply.

DANVILLE.

November 12. Diphtheria broke out in the Danville public schools the last week in October. Some fifteen cases were discovered, all at first being taken for tonsilitis. Three deaths, however, called the attention of the people and physicians to the situation. Cultures were made and it was shown that diphtheria was the disease they had to deal with. The schools were dismissed. On November 9 the President of the School Board called at the office of the State Board of Health and asked a visit from the State Health Officer, to inspect the school children, who would be called to school again on November 12. I arrived at Danville at 8:20, and was promptly at the schoolhouse, in the primary room, at 8:45. Dr. Hoadley, County Health Officer, and Dr. Parker, City Health Officer, met me and aided in the inspection of the school children. Twenty-three children out of thirty-three registered in the primary room, appeared to attend school. The temperature of each child was taken and a thorough examination made. Of this number thirteen were sent home. Three were found to have diphtheria, as was proven by direct microscopical examination of the throat exudate. The three were, of course, immediately sent home with notes to their parents, telling of their condition and directing what should be done. Afterward the local Health Officer imposed quarantine. The ten other children were found with from one to two degrees abnormal temperature and may be said to have severe colds. Being obviously unfit to remain at school, they were sent home with kind notes to their parents, suggesting that medical attention be given the children. I returned on the afternoon train, leaving instructions with the Health Officers, named above, to inspect all the other rooms, which they did on the two following days. Dr. Hoadley reported by letter that a

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better condition was found among the older children, but three were discovered who were ill, and who were, of course, sent home. The President of the School Board said it should be his endeavor hereafter to have medical inspection made of all school children at various times.

FOWLER.

November 26. Arriving at Fowler, Dr. J. S. Mavity, Health Officer of Benton County, met me at the station. We immediately went to inspect the jail. It is a stone and brick building, built some eighteen years ago. It is unsanitary in every respect. The ventilation is imperfect, the closets out of order, and the odors issuing from the prisoners' department were very offensive. There were four prisoners in the jail at the time. All of them seemed quite well. One was insane, but not perceptibly ill. I joined Dr. Mavity in recommending to the Commissioners that early action be taken to relieve the unsanitary conditions found. We next inspected the schoolhouse. It was built in 1894. It is constructed of brick and stone and has ten rooms. It is supplied with Smead dry closets and is heated by furnaces. Two of the rooms were found to be unsanitary inasmuch as the ventilation was obviously imperfect. Upon entrance to these rooms, a very perceptible odor was distinguishable. The odor was that which is always found where bad ventilation exists. The dry closets were perfect.

Benton County is distinguished by the fact that not a single death occurred from typhoid fever within its borders during the statistical year ending September 30. But one case of typhoid fever was known and the patient in that instance had been to Chicago for a few days and within two weeks after his return was taken down. In inspection of this, it was discovered that the inhabitants of Benton County use nothing but driven or bored wells. With Dr. Mavity, I walked the town over, trying to discover a dug well, but such a thing could not be found. I think this is a splendid illustration of the advantages to be derived from driven wells and is confirmatory of the well-known contention of sanitary science, that typhoid is a water-borne disease.

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NORTH VERNON.

December 1. At North Vernon, I was met by Dr. Mitchell, County Health Officer, and went immediately to the church where the County Teachers' Institute was in session, as the object of my visit was to address said institute upon "Schoolhouse Sanitation." In my address I endeavored to cover pretty thoroughly the whole ground, for ample time was accorded for that purpose. What I had to present was received with favor, for a special vote of thanks was given me.

In the afternoon, together with three members of the School Board, I visited the public school building. This is an old brick building and not up to the sanitary standards of the present day. The rooms are insufficiently lighted. The building is warmed by a furnace and the ventilation is through ducts in the wall. The heating and ventilating apparatus was supplied by a Cincinnati firm. School was not in session and the furnace was not in operation, and I therefore could not determine as to the sufficiency of the apparatus. I made verbal recommendations to the authorities as to various improvements which might be made.

COLUMBUS.

December 5. Arriving at Columbus, I was met at the station by Dr. Kirkpatrick, local Health Officer. We immediately started upon a tour of inspection of the various schoolhouses.

Maple Grove Schoolhouse, six rooms, was new, built of brick and stone, favorably located. It was warmed and ventilated by modern, approved sanitary methods. The apparatus was supplied by an Indianapolis firm. The only complaint that the teachers made was that in very cold weather the rooms were not warm enough, and it became necessary, under such circumstances, to dismiss the school. An inspection resulted in facts which lead to the opinion that the apparatus was not sufficiently large to do the work demanded of it.

North Schoolhouse was a new building of six rooms. It was intended to be sanitary in every respect, but evidently the ventilating apparatus does not work, for the odor which is perceptible in badly ventilated rooms was plainly apparent in every room which was visited.

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North Schoolhouse was an old building of eight rooms. Basement had been constructed underneath part of the building very lately and the furnace put in. The furnace very thoroughly warmed the building with fresh, warm air, but the rooms were unsupplied with ventilating ducts.

South Schoolhouse. This building was ventilated by windows and doors and heated by common stoves. It was unsanitary for this reason.

Central School Building. This is a very old building and was warmed by stoves and ventilated by windows and doors.

High School Building. This was a comparatively new structure, warmed and ventilated by furnaces and ventilating ducts. The apparatus was working well in all of the rooms. The only criticism to be made was that this building was overcrowded, the regulation amount of space not being accorded to each student. Appropriate written recommendations were made upon the spot concerning the situation, and addressed to the local School Commissioners.

RICHMOND.

December 11. Upon telephone from Dr. T. Henry Davis, Secretary of the Richmond City Board of Health, I went to Richmond to investigate a case of eruptive disease which was supposed to be smallpox. Arriving at the station, I was met by Dr. Davis and immediately taken in his carriage to the house which contained the patient. Very brief examination disclosed that said patient was not suffering from smallpox. The quarantine was therefore raised.

GREENSBURG.

December 12. Upon invitation from the School Board and the principal of the schools at Greensburg, I visited the town, taking along our anemometer, also the polymeter, and an apparatus for testing the purity of the air. These three instruments were left with the Superintendent, after instruction in how to use them. There were few of the rooms in this new schoolhouse which were found to be properly ventilated. Humidity also was not correct. No report has as yet been received from the Superintendent of Schools as to his final results.

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VINCENNES.

December 18. Some months ago, as appeared in my reports to this Board, I was called to Vincennes by the County Health Officer and the city authorities to consult in regard to the pollution of the Wabash River, by a large distillery, situated just above the waterworks, which supplied the city with water. At that time, report was made that the distillery was polluting the stream very materially, which undoubtedly had considerable effect upon the health of the citizens. Complaint of the situation was made to the grand jury and it was upon summons of the grand jury of Knox County that I visited Vincennes. My testimony was given before the grand jury, but I have had no report or information concerning what action was taken.

MICHIGAN CITY.

December 27. On account of the appearance of a suspicious eruptive disease in two inmates of the Indiana Prison at Michigan City, I left Indianapolis to visit the prison on December 27. Arriving in Chicago on December 28, after becoming chilled in the sleeping car, I was taken sick and compelled to go to the hotel and go to bed. I suffered severely during the day and passed a very miserable night. On Saturday morning, December 29, physicians were summoned and my trouble was diagnosed as appendicitis. Dr. Arthur Reynolds, Health Commissioner of Chicago, showed me every attention, and Dr. Herman Spalding, attached to the Health Department of Chicago, had me taken to St. Luke's Hospital. There I was very ill for a period of seven days, finally recovering sufficiently to return home, where I was confined to my bed for two weeks more. The trip, therefore, to Michigan City was abandoned and nothing was accomplished.

The following circular was sent to all County Health Officers at the beginning of the new statistical year:

October 9, 1900.

Dear Doctor—The new health law of 1899 has been in force now for a year. The second year commenced October 1. The work of the first year has been well done, but of course, we must all strive to do better. The salaries of County Health Officers were increased and fixed by the last Legislature, under the promise that the county officers would do more and better health work. You are the superior Health Officer in your county.

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and it is your duty to see to it that the health law and the rules of the State Board of Health are enforced thoroughly and completely in your county. Your subordinates should be visited at least twice a year, their books inspected, and inquiries and inspections made. In a word, you are to be diligent in the health cause, instructing the people in hygiene and protecting them according to the law, against epidemics and unnecessary diseases.

Mortality statistics are now well reported, but we are not getting quite all of the deaths, and they must be secured. To this end, you are to visit your subordinates as frequently as you conveniently can, watch the newspapers for deaths and see to it that they are reported by making inquiries. Do the same, also, in regard to births and disease statistics, the diseases being enumerated in Rule 1. Our birth and disease statistics must be improved. It is your duty to see that this is done in your county. Our Monthly Bulletin has touched upon this several times, and forms of affidavits have been given for making complaints against offenders. Respect is always accorded officers who fearlessly and impartially execute the law, and disrespect is accorded those who do not.

The trimming, hesitating officer, he who does not inform himself of his duties and then honestly perform them, is, of course, a deficient. Do not fail this year, commencing October 1, to make quarterly report to your County Board of Health of all work done, and transmit a copy to the State Board. Be sure also to arouse an interest in the members of your Board in public health affairs. Public health is public wealth. To let preventable diseases go unprevented, is for the Board to fail to obey the State law, to fail in a common, christian duty; to fail in promoting the public happiness and welfare. Not a few doctors need to have their attention drawn to the duties they owe to the State and their neighbors. Health work must obviously be done with tact, and the first step is to inform yourself fully in regard to the law and the rules. Every officer should own a good work on hygiene and study it well. The law says that "all officers shall inform themselves in hygiene according to the requirements of the State Board of Health." No requirements have yet been formulated, but will be ere long. Rohe's Hygiene is a good work upon the subject. Be sure to read and file the Monthly Bulletin.

This is a circular letter sent to every County Health Officer in the State and we are sure that it will be received in the spirit in which it is sent.

Very truly yours,

SECRETARY.

By order of the State Board of Health.

A NUISANCE AT COLUMBUS.

On account of the rather extra extraordinary circumstances, I make this report of a slaughterhouse nuisance at Columbus, Ind. In East Columbus, a suburb or part of Columbus, Bartholomew County, are two slaughterhouses, one owned by Wolf Brothers, and the other by John Dahns. Both of these slaughterhouses must be foul and very unsanitary and also conducted in an unsanitary way,

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for citizens in the neighborhood made strong petitions, requesting the health authorities to abate them. These petitions complained of foul and offensive odors and of repulsive sights. The petitioners were advised to appeal to Dr. J. S. Arwine, Health Officer of Bartholomew County, in the matter. It seems they understood that Dr. Arwine had full power to abate nuisances, and on account of the failure of the Board of Health to act upon the report and recommendations of Dr. Arwine, the petitioners considered Dr. Arwine to blame and made a second petition to the County Board of Health, requesting that the salary of their Secretary be withheld for that quarter on account of inefficiency. This petition, a copy of which is appended, was referred by the County Board of Health of Bartholomew County to the State Board of Health. The letter was formal and was issued by the Auditor. Said letter is also appended hereto. As Secretary of the State Board of Health, I returned the petition with the following letter addressed to the Auditor:

November 10, 1900.

Hon. Samuel W. Fitch, Auditor Bartholomew County, Columbus, Ind.:

Dear Sir—The State Board of Health has submitted the document submitted to it by the honorable Board of Health of Bartholomew County, and I have full directions for reply.

County Health Officers derive their power entirely from the State Board of Health and from their own County Board of Health. The State Board of Health issues rules, a copy of which is enclosed, which direct all Health Officers in the work of disease prevention. It is left for local Boards of Health to issue such rules as local conditions may demand. In the matter of any nuisance occurring in Bartholomew County, it is the duty of the County Health Officer to make full report concerning the same, with recommendations to his Board of Health. Said Board, under the law, should then take such action as in its judgment seems proper. Dr. Arwine has not the power to abolish a nuisance, but the County Board of Health of Bartholomew County has almost absolute power so to do. If, therefore, Dr. Arwine made his report to the County Board of Health with recommendations, either verbal or written, he is relieved of all further responsibility, except the execution of any orders which his Board might issue. We hope the Bartholomew County Board of Health will find it possible to take proper action in suppressing the nuisance complained of at an early date. The State Board of Health can not, with the meager evidence at hand, offer an opinion in regard to the faithfulness or unfaithfulness of Dr. Arwine.

Very truly yours,

SECRETARY.

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State of Indiana, Bartholomew County, ss.:

In Commissioners' Court, November Term, 1900.

In the matter of complaint of slaughter nuisance in East Columbus.

Come now D. Ogden and others and file and present petition to the Board to abate nuisance of slaughterhouse in East Columbus, which petition is in words as follows, to wit:

And the Board, after a careful examination of said petition, and being sufficiently advised in the matter, order that said petition be sent to the Secretary of the State Board of Health for proper action, and the Auditor is hereby directed to transmit to said Secretary a certified copy of this order.

I, Samuel W. Fitch, Auditor within and for said county and State, do hereby certify that the foregoing is a true and complete transcript of the proceedings of the Board of Commissioners of said county in said matter, as appears of record in my office.

In testimony whereof I herewith subscribe my name and affix the seal of the Board of Commissioners, at the city of Columbus, this 7th day of November, 1900.

SAMUEL W. FITCH,
Auditor of Bartholomew County.

Columbus, Ind., October 4, 1900.

State of Indiana:

In Commissioners' Court, October term.

In the matter of the quarterly allowance of Dr. J. S. Arwine, for services as Secretary of Bartholomew County Board of Health.

We, the undersigned citizens and taxpayers of said county, hereby protest against the allowance to be made to the said Secretary of the County Board of Health for the following reasons, for grossly neglecting his duties as such officer in the following instances, to wit:

For some months past there has been existing in East Columbus a slaughterhouse nuisance from Wolf Brothers' and John Dahns' slaughterhouses. The smell has been so bad from these places, especially at night when the wind was from the northwest, that we were unable to sleep, and sickness has been caused by failure on his part to abate same.

On September 10, Dr. J. S. Arwine, Secretary of the County Board of Health, was notified, in writing, of the existing nuisance and asked to have same abated at once in order to preserve the health of the citizens of East Columbus. There has been no relief and the nuisance still exists, and no effort on his part has been made to abate the same. We are still suffering from the effects of the slaughterhouse nuisance without relief and no promise of any.

At this date the smell is so great from these slaughterpens that we are unable to sleep at night, and sickness is on the increase, caused, we believe, solely from the smell from these disease-breeding slaughterhouses.

Signed: D. Ogden; J. H. Cook; D. W. McClure; Amos Dark; John A. Waggen; J. O. Wagner; R. Elzea; Samuel Gooden; John E. Camp-

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bell; John J. Tuell; M. J. Swartwood; D. D. Swartwood; Eli Lazzell; Marion Disney; Arthur Monroe; Walker Tusser; Scott Harrison; John Gibley; Albert Rush; A. M. Moreton; Ed. Graffa; L. F. Brooks; George Bearnhart; Jas. Hendricks; Henry Graffa; Henry A. Hulse; A. H. Wilson; Josh Nail; Leonard Lay.

And the Board, after a careful examination of said petition, and being sufficiently advised in the matter, order that said petition be sent to the Secretary of the State Board of Health for proper action, and the Auditor is hereby directed to transmit to said Secretary a certified copy of this order.

I, Samuel W. Fitch, Auditor within and for said County and State, do hereby certify that the foregoing is a true and complete transcript of the proceedings of the Board of Commissioners of said county in said matter as appears of record in my office.

In testimony whereof, I hereunto subscribe my name and affix the seal of the Board of Commissioners at the City of Columbus. this 7th day of November, 1900.

SAMUEL W. FITCH.
Auditor Bartholomew County.

REPORT OF NUISANCE AT CROTHERSVILLE.

The J., M. & I. Railroad maintains a stock pen in the very center of the town of Crothersville, Jackson County. This stock pen has been an offense to the people of Crothersville for a long time and many efforts have been made to have it removed. At last an appeal was made to the State Board of Health, the petition being signed by 120 residents. The following is the text of the petition:

Crothersville, Ind., August 20, 1900.

To the Honorable Indiana State Board of Health of Indianapolis:

We, the undersigned, residents of said town, hereby petition your honorable body to abate and remove a nuisance which exists within said town, described as follows, to wit: A stock pen located on the west side of the P., C., C. & St. L. R. R. switch, northwest of the railroad depot, within said town and maintained by said railroad company.

That the same is offensive, physically, to the senses, and thereby makes life uncomfortable to the people residing in its locality and also to passersby by its stench, unsightliness, and also is noisome, and that the same is dangerous to the public health.

Signed by 120 Residents of Said Town.

Upon receipt of this petition the petitioners were recommended to appeal to their own Board of Health, which had ample powers

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in the premises. The appeal was accordingly made and the following order was passed under the advice of the attorney of the Town Board:

State of Indiana, Jackson County, ss.:

Office of the Board of Health of the Town of Crothersville, Ind.,
October 10, 1900.

To the Pittsburg, Cincinnati, Chicago & St. Louis Railway Co.:

You are hereby notified that on the tenth (10th) day of October, A. D. 1900, the Board of Health of said town adopted the following resolution:

Resolved, That in the opinion of the Board of Health of the town of Crothersville there exists upon the following premises (the parcel of land lying immediately west of the P., C., C. & St. L. Ry. switch in the town of Crothersville, northwest of the P., C., C. & St. L. depot), a public nuisance, dangerous to life and health, consisting of a stock pen used for the purpose of loading cars for shipment, and within said pen and around the same there exists continually filthy and unhealthful deposits by the stock confined within said pen, and the agent, owner, occupant or tenant of said premises is hereby ordered to abate the same on or before the first (1st) day of December, A. D. 1900, by removing the said stock pen, together with the filthy deposits in and about the same, outside of the corporate limits of the town of Crothersville, or the same will be done at the expense of the corporation and the costs and expenses thereof assessed upon said property and the penalties prescribed by law for the disobedience of this order will be enforced and the clerk of this Board is hereby directed to serve a copy of this resolution upon the agent, owner, occupant or tenant of said premises.

You will comply with said resolution within the time therein specified or be subjected to the penalties of the law.

By Order of the Board of Health of the Town of Crothersville, Ind.
CHARLES W. WARD,
Clerk.

I hereby certify that the above is a true copy of the resolution passed by the Town Board of this town on the 10th day of October, A. D. 1900.
CHARLES B. WARD,
Town Clerk of the Town of Crothersville.

There is a clause in the said law to the effect that subordinate Boards of Health shall abate nuisances according to the approval or commands of the State Board of Health.

The attorney, Alfred Cox, of Crothersville, thought it best to secure the approval of the Board and then serve notices under the order, upon the railroad company. This action is deemed worthy of special report by the Secretary because the State Board has

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for several years been trying to arouse the citizens of Crothersville to abate the many unsanitary conditions which exist in that town. It is most proper, therefore, to commend this forward step.

TYPHUS FEVER.

Dr. R. S. Wilson, of Scott, Ohio, in a professional visit at Berne, Indiana, reported two deaths from typhus fever. This was considered of enough importance for special inquiry. Accordingly, Dr. Costello, Health Officer of Adams County, was written to on the subject, and directed to investigate. Dr. Costello reported:

"Dr. Schenk, Health Officer of Berne, says: 'Dr. Calderwood, of Ohio, first treated the Smithley children, and diagnosed their disease dysentery. Dr. Wilson was called just in time to give death certificate. I am satisfied there has been no typhus fever in this neighborhood.' "

Ordered, That the Secretary notify Dr. Fuller, of North Vernon, to appear before the next regular meeting for trial under the charges heretofore made and recorded. Dr. Fuller to be informed that failure to appear will be considered cause for removal. Those making charges shall also be informed.

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SECOND QUARTER.

February, March and April, 1901.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., April 19, 1901.

Present: Drs. Davis, Forrest, Hurty.

President Davis called the Board to order, and ruled that it proceed immediately to organize and elect President and Vice-President.

President Davis nominated Dr. Forrest to serve as President from March 1, 1901, for two years. Seconded by Dr. Hurty. Motion carried unanimously.

Dr. Forrest nominated Dr. Wishard for Vice-President.

President Forrest then took the chair.

Minutes of the last meeting read and approved.

Moved by Dr. Davis that the order issued at last meeting regarding Dr. Fuller, of North Vernon, be suspended. Seconded by Dr. Hurty. Carried.

Secretary's report for the quarter was read, accepted and ordered spread of record.

SECRETARY'S REPORT FOR QUARTER ENDING APRIL 1, 1901.

The second year for the collection of vital statistics commenced with January. The various tables of statistics for publication in the annual report are not yet ready to send to the printer, but will be in a few weeks. Said tables are eleven in number:

No. 1. Deaths by months, counties and sex.
No. 2. Deaths by ages, counties and sex.
No. 3. Deaths statistically classified from all causes, with rates per 100,000.
No. 4. Deaths by counties, geographical sections.

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No 5. Deaths from important causes.
No. 6. Deaths from important ages.
No. 7. Deaths by grouped classifications.
No. 8. Deaths by months and ages.
No. 9. Deaths by counties for all causes, and sex.
No. 10. Births.
No. 11. Marriages.

During the quarter the following analytical and microscopical examinations were made at the Secretary's expense:

Diphtheria, 5; 3 positive, 2 negative.
Sputum, 12; 1 positive, 2 negative.
Waters, 12; 3 good, 9 bad.
Vinegar, 1; 1 bad.

Four visits were made by the Secretary during the quarter:

March 7. Winchester—Account smallpox.
March 19. Lynn—Account schoolhouse.
March 27. Terre Haute—Account normal school.
March 29. Aurora and Rising Sun—Account smallpox.

Full report of three visits, together with report of a typhoid epidemic at Irvington and a report of smallpox at East Chicago, are given herewith.

WINCHESTER.

March 7—

I visited Winchester for the purpose of settling diagnosis of an eruptive disease supposed to be smallpox. Upon arrival the house was visited and the patient was found to be suffering from a case of eczema.

LYNN.

March 19—

I visited the town of Lynn, Randolph County, at the invitation of Dr. Cox, Health Officer. He had been instructed by the Town Board to invite the inspection by the State Board of Health of their schoolhouse. Said schoolhouse was found to be an old and dilapidated two-story brick structure. It had four rooms and no basement. Foundation was of stone and the site fair. The steps for gaining access to the second story were steep and winding; ventilated by windows and doors; heated by stoves; slate blackboards in all rooms.

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High-School Room. The room was 31x21x12 feet, and contained 25 students. This leaves ample space. The attendance was 95 per cent. of the enrollment, but the teacher said that coughs, colds, sore throat and headaches were complained of all the time. The room was lighted from two sides.

Grammar Room. This room was 40x28x12 feet and had 52 enrolled sudents. Average attendance was 45. The seats were only passable, some of them being old. Teachers said the children complained of coughs, colds, headaches and eyeaches. Windows on three sides.

Intermediate Room. This room was 46x28x12 feet. The enrollment was 55; average attendance, 95 per cent. Seats not modern. Windows on three sides. Teacher reported that coughs, colds, headaches, eyeaches, and sleepiness were complained of. No diphtheria or scarlet fever during the year.

Primary Room. This room was 31x21x12 feet with an enrollment of 64. Average attendance, 90 per cent. Floor in bad repair. Teacher reported the students had coughs, colds, eyeaches and headaches. Seats were modern and light entered from two sides. No contagious diseases during the year. The outhouses were passable; paths leading to the same were quite good. Water is supplied to the students by placing a bucketful on a box in the hall, and was supplied by two or three tin cups. The following letter was written by Dr. Cox, after his return:

Dr. C. E. Cox, Health Officer, Lynn, Ind.:

Dear Doctor—As State Health Officer I wish to make some recommendations in regard to your schoolhouse. Please present these recommendations to your School Trustees, and, if practicable, make them known to the citizens of Lynn. My object in this matter is to better the condition, if possible, that the children of Lynn may have a sanitary environment and will thus be aided in their health and also in their book progress.

First, permit me to present a detailed account of the exact condition of the present schoolhouse. It is a two-story brick, four rooms, no basement, stone foundation, walls are cracked and the building is probably dangerous. The building site is fair. There are steep winding stairs to the second story. These steep stairs are undoubtedly a cause of injury to a percentage of the children. Stairs should be broad and easy to ascend, and there should be a landing half way up. Your schoolhouse is ventilated by windows and doors, is heated by stoves and the rooms are lighted generally from three sides. All of this is wrong. It has been absolutely proven that it is impossible to ventilate schoolrooms properly

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by windows and doors without draughts. As draughts are injurious, and as children must have pure air and plenty of it in order to be surrounded by the best conditions of health, it is plain that this method of ventilation is insufficient and all wrong.

The rooms are heated by stoves. This is a great mistake, for it is impossible to evenly warm schoolrooms with stoves. In this instance your stoves are supplied with natural gas, and there is no disturbance due to firing in the room. Ordinarily, however, this disturbance is a factor of considerable moment. You, of course, are aware that the children who sit near the stoves are sure to be rendered uncomfortable by the excessive heat. The pores are open, perspiration is induced, the child becomes restless and uncomfortable and for these reasons can not study and progress as it should. In addition, on account of open pores, and undue perspiration, the child is most liable to congestion when it goes out of doors. The children removed from the stoves are, of course, frequently chilled, their feet cold and their pores are tightly closed. They, too, suffer and these conditions prevent them from studying and progressing as they should. An unevenly warmed room, therefore, produces discómfort and sometimes brings illness, and these conditions prevent progress. This simply means a waste of school money. It is not wise and economical to surround our children with conditions productive of discomfort and illness and which prevent application to books and to the work in hand.

I note that the high school attendance is about 95 per cent. That is to say, that 5 per cent. of the pupils are perpetually absent on account of minor illness, such as coughs, colds, catarrh, sore throat, headaches, eyeaches, etc. The average attendance of the grammar room is 90 per cent. The older pupils are better able to withstand the evil conditions, for they have already been hardened, to a degree, to unsanitary surroundings The attendance in the intermediate room and also in the primary room is about 90 per cent. Undoubtedly the attendance would be much better if the surroundings were not of such a character as to produce illness.

The lighting of schoolrooms is a matter of very great importance. People who have not studied this subject are apt to think that any kind of lights coming from any direction is all that is required. Investigation and study have shown that the eye-strain and with it nervousness, indigestion, headaches, etc., are all very frequently due to improper lighting of schoolrooms. The best possible light is skylight. Where skylights are used they should be made tight as to always exclude rain. Ordinarily it would be impossible to light schoolrooms by skylight. The next best way is to permit the light to come in from one side only and so arrange the desks as to permit the light to fall over the left shoulders of the pupils. When this is done the windows should reach clear to the ceiling of the room, and their area should equal one-sixth of the area of the floor. With a flood of light entering from one side of the room, falling upon the books and filling the upper portion, no eye-strain would result. As said above, eye-strain induces nervousness, indigestion, sleeplessness and is sometimes very serious in it final effects.

Lynn, unquestionably, needs a new schoolhouse. The town can not afford longer to continue to present an old, dilapidated, dangerous, unsanitary building. In the present schoolhouse children are having their

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health injured daily. They can not make the progress they should, and the progress they would make under first-class sanitary conditions. Money is being thrown away at Lynn, which should be saved. Happiness is also being wasted, for one case of sickness in a family which might be produced by unsanitary surroundings at school is a source of unhappiness.

The State Board of Health most earnestly urges the people of Lynn to proceed without delay to take those steps which are necessary to supply the town with a new schoolhouse, perfectly sanitary in every respect and which would be a credit. It is by our works that we are known, and if the town of Lynn wishes to be known as progressive and up-to-date and wishes at the same time to bring great benefit to the people, a modern sanitary schoolhouse will certainly be constructed. The State Board of Health unhesitatingly condemns the present building. This does not mean that an order has been issued commanding the same to be abandoned. We simply mean that said Board gives warning of the unsanitary conditions which now exist with their unquestioned attendant illness and their threat of future ill health.

If our recommendations are accepted and a new school building is determined upon, we hope your authorities will call upon the State Board of Health for any help we can render. The plans for the new building should be submitted to this Board for examination and approval in so far as sanitary points are concerned. We will gladly give you our opinion and advice and hope you will be pleased to command us.

SECRETARY STATE BOARD OF HEALTH.

TERRE HAUTE.

March 27—

I went to Terre Haute on account of request of management to consult in regard to addition to be made to the building which was allowed by the last Legislature and also to consider certain sanitary features of the building. Upon arrival I was received by Prof. Rettger. Plans were reviewed and found very excellent, and opportunity offered but one recommendation which was adopted.

RISING SUN.

March 29—

I visited Rising Sun on account of written invitation of town authorities and merchants. The invitation was extended because of smallpox existing in Ohio and Switzerland counties. I found that smallpox had prevailed quite extensively for at least one month prior to my visit in country districts. As usual, some physicians pronounced it chickenpox; and such were very loud in their denial that it was smallpox. The Health Officers, in their intelligence, had pronounced the eruptive disease smallpox and had

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proceeded accordingly, but the moral support of the people was not offered. There had been, since the outbreak, and up to the time of the visit, at the lowest estimate, 450 cases, but no deaths. There had been no cases at Rising Sun. At West Enterprise and vicinity there had been probably 200 cases, at Florence and neighborhood probably fifty cases. The officers were instructed to continue quarantine and to urge vaccination. The positive diagnosis of the eruptive disease was made as smallpox, and those physicians who contended otherwise were commanded to so consider it. The town authorities of Rising Sun and Patriot were met, the subject discussed and they resolved, upon recommendation, to urge vaccination upon the people and to furnish free virus to the poor.

SMALLPOX AT EAST CHICAGO.

On March 4 a letter was received from Dr. Scheicker, Health Officer of East Chicago, telling of smallpox at that place, and relating that trouble was experienced in establishing quarantine and managing the disease. He was replied to, directing how he should proceed, and was furnished with plenty of smallpox circulars. It seems there were many citizens who still would not believe the disease to be smallpox and the State Board of Health was appealed to by the city authorities in a telegram as follows:

I am directed by the City Council to urge you to send some one here by first train to investigate supposed cases of smallpox, with authority to act if necessary.

W. F. HALE,
Mayor.

Accordingly, Dr. A. W. Brayton was commissioned a Deputy Health Officer to go to East Chicago, make investigation and give such directions, under the law, as in his judgment seemed best.

Herewith is Dr. Brayton's report of his visit:

With the authority vested in me by the State Board of Health as deputy, I visited Hammond and East Chicago Saturday, March 9, with my son, Dr. N. D. Brayton, and studied the smallpox situation there. I will say that Dr. H. Spaulding, of Chicago, was in East Chicago the Friday preceding and found the same conditions, and that as far as I could learn, his conclusions agree with mine.

Smallpox appeared in East Chicago in late January, or early February. Two cases were in the detention house for a time, were cured, discharged and the detention house closed.

In January Dr. Spear had smallpox, which both he, Dr. Rose, Drs. Davis and Swan, of South Chicago, regarded as vaccinia. Later his

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baby had smallpox, which was regarded as scarlatina. His wife escaped, having been vaccinated. These two cases are now well and are discharged.

I found a woman quarantined with smallpox. She was living with her two children, nine months and three years old. The house is quarantined and guarded. They live on the second floor over the premises of Dr. Spear. They are shut off from other occupants of the building. Access is only by the back stairs.

Another domicile has a case of smallpox in a boy of fourteen years of age. The family, eight or ten, has been vaccinated and a guard lives in a tent in the street. In the four cases seen the disease is very mild.

I recommended that the schools be kept closed until next Monday, and in the meantime that all children not vaccinated be vaccinated and allowed to enter school only on physicians' certificates.

I had the Mayor, the two local editors, the Health Officer and Dr. Scheicker, also Dr. Clark, of Hammond, a very capable man, assembled and discussed the entire situation amicably, and smoothed over all points of friction.

I found the authorities alert and the cases well quarantined. I ordered that they get other and better vaccine, as that they had been using was inert and in no instance did I see a good "take."

Very respectfully,

A. W. BRAYTON.

TYPHOID EPIDEMIC AT IRVINGTON.

Irvington is a town of about 1,800 inhabitants, in Marion County, about four miles east of Indianapolis. Butler University is situated there. Dr. H. W. Ridpath, Health Officer of the county, presented the following report of a typhoid epidemic at Irvington as follows:

Indianapolis, Ind., February 8, 1901.

To the State Board of Health:

On January 23, 1901, I received a request from Mr. J. P. Finley, of Irvington, to investigate a number of cases of illness at 110 Butler Avenue. The following day I visited Irvington and found a most serious condition existing. The property known as 110 Butler Avenue is owned by Mr. Finley and conducted by Mrs. Allen as a boarding house. Some forty or forty-five students from Butler College have been taking their meals at this clubhouse, and a number of them also roomed there. I found that some twelve or thirteen of these students had been stricken with fever—typhoid in character—within the ten days previous. Dr. Thompson, of Irvington, was called on January 14 to see Walter Roe, and on reaching his patient found several suffering from similar conditions, which, in a few days, developed into genuine typhoid.

Immediately following these first cases others were stricken and within a few days twenty-one students were confined to their beds.

The house occupied by the infected students is new and the sanitary conditions surrounding appeared to be good, but, upon investigation, I

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found that a private drain, built with the consent of the Town Board of Irvington, passed within a few feet of the house and discharged its contents within forty feet of the rear door of the same. This sewer, as I learned, is made of soft, porous tile, 8 or 10 inches in diameter, and extends from Downey Avenue westward, crossing Dillon and Butler Avenues. There is also a shorter drain connecting near Dillon Avenue with the main drain. Some ten or fifteen houses are connected with this drain. Water closet connections were forbidden, but I have it from reliable sources that water closet matter has been discharged at the mouth of the drain. In my examination of the boarding house I found a sink in the kitchen connected with this drain by straight pipe without any trap connections, thus allowing the house to be continually filled with pollution gases. Believing that the cause of this epidemic was due to infection from this drain, I immediately notified Mr. Finley and asked him to bring the matter to the attention of the local Health Officer, Dr. J. B. Terrell, and through him to the Town Board. A few days later the alarm became greater. A number of the students had been transferred to their homes. Two deaths had occurred—Walter Roe, of Boggstown, and Morton Green, of Brownsburg. The citizens were thoroughly alarmed; the boarding house was practically abandoned and the college considerably harmed. I found that previous to the time of this epidemic these students had been drinking water from other wells than the one on the premises and these waters are now being collected for analysis. I made a second visit to the town and made a thorough investigation of nearly all the houses supposed to be connected with the drain, but was unable to find any such connections.

I send you this communication to acquaint you of the serious condition in our suburb, with a request that you take whatever action seems in your judgment wise. The accompanying chart will help you to more fully understand the situation. The crosses indicate residences connected with the sewer and the small circles the location of wells from which water was used. The line drawn from the church to the square indicating the boarding house, will show you the course of the sewer.

Any assistance I may be able to render you will be cheerfully given in this matter.

Respectfully yours,

H. W. RIDPATH,

Secretary.

Upon receipt of this letter, four samples of water were collected from the following places, and analyzed at the Secretary's expense: Nos. 63 Dillon Avenue, 110 Butler Avenue, 154 Butler Avenue, 131 Butler Avenue, being the houses visited by the disease. All four samples, upon analysis, proved to be polluted, there being abundant chemical and bacteriologic evidence supporting such conclusion. The following letter was then written to the Town Board of Irvington, to which no reply was received:

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Indianapolis, Ind., February 26, 1901.

To the Town Board of Irvington, Irvington, Ind.:

Gentlemen—Under the laws of the State of Indiana you constitute ex officio a Board of Health, and it is as such Board that we address you. The law says:

"The Trustees of each town shall constitute a Board of Health, ex officio, whose duty it shall be to protect the public health by removal of causes of disease when known, and in all cases to take prompt action to arrest the spread of contagious and infectious diseases, to abate and remove nuisances dangerous to the public health, as directed or approved by the State Board of Health, and perform such other duties as may from time to time be required of them by the people."

With this understanding you will readily see that the recent outbreak of typhoid fever at Irvington is a matter which directly concerns the State Board of Health and of which it is our duty to take cognizance. Concerning this epidemic of typhoid, we have a report from Dr. H. W. Ridpath, who is the County Health Officer. In this report he simply gives a record of the persons who were attacked by the disease and of those who died and gives his opinion that all of this sickness and these deaths would have been prevented had not certain wells become polluted from a certain drain which now carries sewage and which was never intended for such purpose. It is sad indeed to think that valuable lives have been lost and sickness has been endured which was entirely unnecessary. We say it is not necessary, for, of course, you know that typhoid fever is a filth disease and, like sin, is a reproach to any community. This outbreak severely reflects upon Irvington, for it simply means that you have filth conditions in your town which are not a credit to you.

The law reposes in the Town Board all the power that is required, and makes it its duty to see to it that conditions do not exist which will permit such destruction to health and life as has occurred in your midst. You, of course, will not for one moment think that it is economy for you not to take proper action in regard to this matter. On the contrary, you will undoubtedly agree with us that to permit the condition to exist which might again cause sickness and death, will simply be an exhibition of extravagance and wrong doing.

Recommendations.—We respectfully recommend as a measure for the benefit of Irvington, that, as early as possible you employ an engineer to lay off the whole town in a comprehensive system of sewerage. You, of course, will not be able to construct this system at once, but it can be done gradually. The engineer will tell you where the main trunk sewer should run, and this should be constructed at the very earliest moment possible. The laterals can be put in as money and time will allow. Now, having the sewers, the next thing is to pass an ordinance compelling all houses to connect with the same. When this is done the next step is to pass an ordinance abolishing all privy vaults and sinks and all conditions which are calculated to pollute the ground in any way. In this manner the well can be kept pure, but so sure as you permit the present conditions to continue, the ground will gradually become more and more polluted by seepage from your present imperfect sewer-drain and from the vaults and sink-holes.

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Irvington can not grow and its real estate can not become valuable on account of disease and death. A great mistake will therefore be made if efforts are not put forth to banish these filth conditions, which, as said above, are a reproach to any community.

It is impossible to make a better investment than to build sewers and carry out of your town that filth which causes sickness and death.

We recommend further, that this be done as soon as possible, and recognize that it will take time and a considerable expenditure of money to accomplish the ends we have recommended, but we confidently predict that if Irvington will accomplish these reforms there will be an appreciation of property and a fuller measure of happiness for her people. On the contrary, if nothing is done, we can predict a depreciation in property and a lessening of public happiness.

We feel confident you will accept these recommendations in the spirit in which they are offered, and you will recognize that it is our legal duty and power to make said recommendations.

A brief history of the legislation recommended by the State Board seems appropriate. A bill establishing a Laboratory of Hygiene was offered as follows:

A BILL for an act entitled "An act to protect all streams, ponds, lakes and open bodies of water from pollution; to control and to conserve, as far as stream, lake and pond pollution and the public health are concerned, all industries and corporations which place offal, sewage or waste matter into streams, lakes or ponds; providing methods whereby both streams and industries may be preserved to the State; establishing a State Laboratory of Hygiene under the control and direction of the State Board of Health, wherein analysis and experiments for the sanitary disposal of wastes may be conducted, and wherein all kinds of sanitary studies and investigations may be made; providing, also, that the Laboratory of Hygiene shall be used for making food and drug analysis to make possible the enforcement of the pure food and drug statutes; prescribing fines and penalties for the violation of this act; defining the duties and powers of the courts, Attorney-General, Prosecuting Attorneys and the State Board of Health, in relation to this act; fixing an appropriation, prescribing penalties and repealing acts in conflict therewith."

Section 1. Be it enacted by the General Assembly of Indiana, That it shall be the duty of the State Board of Health to make sanitary surveys and inspections of streams, ponds, lakes, factories, mills, works, industrial establishments and cities and towns, in order to obtain sanitary facts and data and samples of material for analysis and study. The State Board of Health and all Boards of Health and their officers shall have the right and power to enter into and upon all premises, buildings and properties for the purposes above named. It shall be the duty of the State Board of Health to early endeavor to make practical use of all sanitary data collected as herein provided, and to discover, invent or apply proper methods for the construction and conduction of a plant for the sanitary disposal of polluting wastes, hereinafter called a Sanitary

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Purification Plant. When, at any time, the State Board of Health shall have decided that a practical and practicable sanitary method of waste, sewage or refuse disposal has been discovered, invented or is otherwise known, it shall be its duty to place the knowledge of such method by information before any court of general jurisdiction in the county wherein is situated any industry or corporation whose refuse, waste or sewage is in question, and it shall then be the duty of such court to cause the owners, managers, trustees or proper officials, or any person in charge of the premises of said industry or corporation, to be summoned to appear before the court at a time fixed by the court, and at the time fixed by such notice, the court shall proceed to determine the sufficiency of such method, and if, in the opinion of the court, it is shown and appears that such disposal method is sanitary and both practical and practicable, then the court shall order, by formal mandate, the adoption of the same within a proper time, and shall also order its construction and maintenance of a sanitary purification plant, and the sanitary purification plant so ordered shall be installed and conducted according to the approval and rules of the State Board of Health. In case of refusal or neglect of any industry or corporation to obey the court's order, as herein provided, then the responsible parties shall be punished as for a contempt of court: Provided, That in the case of a corporation, municipal or private, its officers, or any of them, may be punished by a fine of $500 or by imprisonment not exceeding three months, or by both, or the corporation may be punished by a fine of not more than $500.

Sec. 2. A laboratory is hereby provided for, which shall be designated as the State Laboratory of Hygiene; it shall be located in the State House at Indianapolis, and basement room No. 10 is set aside for the said laboratory. The State Laboratory of Hygiene shall be connected with and be under the control and direction of the State Board of Health, and said Board shall have power to pass rules in accordance with this act, and for the enforcement thereof. The said Laboratory of Hygiene shall be used for making analysis of foods and drugs for the purpose of enforcing the pure food and drug law, for making analysis, examinations and studies for the purpose of enforcing the health statutes; for making analysis, investigations and studies concerning the pollution of streams, the composition of polluting matters of all kinds, and to discover, invent or apply processes for the sanitary disposal of sewage and factory wastes and for no other purpose. The Secretary of the State Board of Health shall be the Director of the State Laboratory of Hygiene and with a consent of a majority of all members of the State Board of Health, shall have power to appoint all employes necessary for the conduct of said laboratory, and said Secretary shall have the power to suspend, at any time, any employe of the said Board, and during such suspension no wages shall be paid, and the suspension shall be a final discharge, when approved by a majority of all the members of the State Board of Health: Provided, That all the skilled, scientific employes of the State Laboratory of Hygiene shall be appointed from an eligible list furnished by the authorities of Purdue University; and said authorities shall secure such list by examination of all applicants at the University at such time, or times, as may be agreed upon by the State Board of Health and the authorities of said University. The salaries of the head chemist and also the head bac-

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teriologist shall not exceed $1,500 per annum, and all salaries shall be paid quarterly by certificates from the State Board of Health, and on presentation of such certificates the Auditor of State shall draw his warrant on the State Treasurer for the amount certified.

Sec. 3. It shall be the duty of the Attorney-General, either individually, by deputy or through Prosecuting Attorneys, to bring immediate suit under this act, in the proper courts, whenever information of food or drug adulteration, information of dangerous unsanitary conditions threatening the public health; information of streams, lake or pond pollution and of the discovery of methods of sewerage or waste disposal may be furnished to him, in writing, by the State Board of Health.

Sec. 4. Five thousand dollars or as much thereof as is found necessary, are hereby appropriated for equipping the State Laboratory of Hygiene with all necessary apparatus, books and appliances, the same to be paid out by certificates from the State Board of Health, and on presentation of such certificates the Auditor of State shall draw his warrant on the State Treasurer for the amount certified; and all certificates shall have attached itemized bills for their face amount, and any unexpended portion of this appropriation shall revert to the general fund within two years from the going into force of this act. For salaries of the employes, maintenance of the laboratory, purchasing of food and drug samples, transportation and hotel expenses of those necessary to conduct investigations and attend prosecutions, and for the necessary incidental expenses, $10,000 per annum are appropriated.

Sec. 5. Any person or persons who, as officers of any corporation, who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined in any sum not less than ten nor more than $100.

Sec. 6. All statutes and parts of statutes in conflict with the provisions of this statute are hereby repealed.

This bill passed the Senate and passed the House to third reading, reaching the House the last week of the session. The last day for legislation was Friday, March 8. The bill was received into the House Tuesday, March 5. The Speaker steadily refused to "hand down" the bill for final action by the House. Several petitions were sent to the Speaker and numerous members called upon him urging that the Legislature be allowed to act upon the bill as the constitution required, but, as already said, it was not handed down, and thus the measure was defeated.

Other health legislation with which this Board had nothing to do, but the bill for which the Secretary wrote and which had the support of the State Superintendent of Public Instruction, was House Bill No. 455, which had for its object the regulating of sanitary features of all schoolhouses hereafter built in Indiana. The bill failed on final passage in the House, only nine affirmative

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votes being given. It is to be deeply regretted this bill did not become a law, for it certainly was in accord with sanitary science and simply required that school children should be surrounded with conditions necessary to preserve their health and to enable them to progress as they should.

Another bill of sanitary interest was Senate Bill No. 405. It was entitled "A Bill for an act prohibiting the sale of, or having in one's possession for the purpose of sale, any article of food or food products, or used or intended to be used, as an ingredient of any food or food products, containing formaldehyde or other antiseptics or poisons, fixing a penalty for the violation of its provisions and providing a method for its collection and declaring an emergency."

This bill was projected for the purpose of attacking the Royal baking powder and all baking powder containing cream of tartar, as an examination of the bill will show. The bill passed and became a law, but when found in the office of the Secretary of State the four words or "bitartrate of potassium" which was included among the illegal substances to be used, were erased by a scratch knife.

The last bill of sanitary interest and which became a law, was Senate Bill No. 267, entitled "A Bill for an act prohibiting the discharge of waste water and refuse of manufacturing establishments into streams or water, conferring certain powers upon the State Board of Health in such cases, providing penalties for the violation thereof, and declaring an emergency."

This law confers powers upon the State Board of Health to grant licenses at its option to manufacturers to discharge waste water and refuse liquors into streams.

BULLETIN AND STATISTICS.

The statistics for each month of the quarter have been collected, tabulated and published in the Bulletin, as usual. The Bulletin also contains for each month an account of sickness and a special account of smallpox.

Applications according to the law were presented for permits to discharge factory waste into streams by:

American Strawboard Co., Kokomo.
West Muncie Strawboard Co., Yorktown.

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American Tin Plate Co., for its works at Elwood, Gas City, Anderson and Atlanta.
The Albany Paper Co., Albany.
Muncie Pulp Co., Muncie.
Consumers Paper Co., Muncie.

The petitions and the law in regard to the matter were fully considered, and Dr. Davis then introduced the following resolution:

Whereas, The statutes provide that permits may be issued by the State Board of Health, at its discretion, allowing waste matters from factories in the State to be deposited into streams, and,

Whereas, No provision was made for expenses incident to visits and investigations which are commanded by the law before permits may be given; therefore, be it

Resolved, That no visits or investigations shall be made, unless the necessary expenses of said visits and investigations are provided by the petitioners.

Unanimously carried.

Moved by Dr. Davis: Whenever the necessary expenses incident to visiting factories and making investigations required in the matter of granting permits to deposit waste matter into streams are provided by the interested parties, the members of the State Board of Health, at such time as may be mutually agreed upon, will visit the localities and factories from which petitions have been received and personally inspect the streams, taking note of the volume of water, speed of current, physical and climatic character and amount of waste which it is desired to deposit or let pass into streams, and report the results of their observations with recommendations at the next regular meeting of the State Board of Health.

Unanimously carried.

The following petition concerning the matter of granting permits to factories to deposit waste into streams were received and ordered spread of record:

Kokomo, Ind., April 18, 1901.

Dr. J. N. Hurty, Indianapolis:

Dear Doctor—Some of the citizens asked me to ascertain if the State Board of Health has taken any action upon the application of the strawboard mill at Kokomo. If you have not, to postpone it a few days until an investigation can be made.

Yours very truly,
EDGAR COX,
City Health Officer.

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Kokomo, Ind., April 18, 1901.

To the State Board of Health, Indianapolis, Ind.:

In yesterday's paper we noticed for the first time that the American Strawboard Co. had made application to your Honorable Board for permit to turn its refuse into Wild Cat Creek. We have not seen the statute under which this proceeding is had, and there is not now time to examine the proceedings and make a formal resistance to the application. Those who are most affected do not know that the matter is before you, therefore they have had no chance to protest. But we represent that there are many people here who can give, and we believe if given a chance, will give your Board strong reasons why this permit should be refused.

We show to your Board that Wild Cat Creek is small, it being, at low water, hardly sufficient to wash away the sewage from Kokomo. When the strawboard plant was in operation here before it discharged vast quantities of refuse into the stream. As this floated down the sluggish current through the hot sun, at times standing in the deep places, the foreign particles in the water decomposed, making the water not simply unsightly, but absolutely offensive. All the fish were killed. After this refuse had floated for a long time down the stream, exposing the refuse to the sun, this odor became far more offensive than when first discharged into the stream, the odor there becoming so strong and offensive that people living three-quarters of a mile away often had to close the doors to shut out its smell. Some families living near had much sickness while this condition lasted, but noticed that they were not sick after this plant stopped. This odor could be smelled much over a mile away. During freshets, when the stream was full, and when the plant was stopped these conditions did not exist, but they did exist during the greater part of the year.

We apprehend that the applicants, in presenting their side, will claim that certain preparations of lime and certain acids contained in this refuse are fine disinfectants, and that the odor is not offensive. But all the lime and acids which they use in this work can not disinfect the large quantities of other matter discharged with the refuse. The past has proven this beyond question. All this lime and acid can no more make this putrid matter sweet than a few drops of carbolic acid can make spoiled eggs palatable or the odor of a polecat sweet perfume. It can easily be understood how a strawboard man would not think the odor so bad. Being in it constantly at the mill, before it has become putrid, he becomes used to it, just like the laborers in fertilizer factories become so accustomed to the odor of old dead animals, that they can eat at the factory in the midst of odors so offensive that an ordinary person could not endure it at all. Moreover, a bad smell that fills the purse of a man, is far more pleasant to him than to a man whose home is made unpleasant by it.

We can further show that if this plant is permitted to operate as a strawboard plant and discharge its refuse into this stream, the conditions which we describe will affect at least thirty-five square miles of farm land in this country, all of which it will render extremely undesirable for homes, and the value of which will be greatly decreased thereby.

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We hope these statements of facts will cause your Honorable Board to carefully investigate both sides of this matter before granting a permit which will result in so much harm to property and homes.

Respectfully submitted,

W. C. OVERTON,
L. F. WILSON,
G. T. AND W. J. CAITCHLOW,
J. F. DIMITT,
D. H. JACKSON,
J. M. WILSON,
W. C. DIMITT.

Moved by Dr. Davis, that the Secretary be ordered to prepare a blank form of application for permission to factories to deposit waste into streams, and submit same for approval of the Attorney-General, said blank permit to be supplied to all persons who wish to make application for said purpose.

The Secretary presented the following concerning Senate Act No. 291:

EXHIBIT "A."

Enrolled Act No. 291—Senate.

An Act to define veterinary medicine, etc.

Section 7. Upon filing evidence of fitness, the Clerk of the county shall issue to such applicant a certificate to practice in accordance with the provisions of this act, in any county of the State of Indiana, such blank certificate to be furnished by the State Board of Health.

Moved by Dr. Davis that Secretary shall prepare a proper form of certificate, as provided in the veterinary law, and deliver to the State Printing Board.

Petition of Max Herlich presented as follows:

New Palestine, Ind., April 17, 1901.

State Board of Health:

I would like to have permission of your Honorable Board to remove two bodies, dead about thirty years ago of cholera; said bodies are buried at their farm and should be removed to a public cemetery about two miles from farm. I will see that graves are well disinfected and everything done according to law. Please send me blanks so I can have the family make them out and send them to you for removal blanks.

Hoping to hear from you, MAX HERLICH.

Moved by Dr. Davis that petition be granted.

Carried.

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Ordered, That the annual May conference shall be held May 27 and 28, and the Secretary shall prepare program and send out call for meeting.

Ordered, The Secretary shall prepare a book for Health Officers which shall contain laws, by-laws, rules, instructions and other information as may seem desirable, the same to be approved by the President before publication; 2,000 copies to be printed.

Moved by Dr. Davis: Whereas, "An act concerning the education of children" was amended by the Sixty-second General Assembly to read: "Section 1. Provided, further, That no child in good mental and physical condition shall, for any cause, any rule or law to the contrary, be precluded from attending school when such school is in session;" and,

Whereas, Public health, life and safety are fundamental laws of society, therefore, the State Board of Health

Orders, That all Health Boards and Health Officers in the State of Indiana shall institute and maintain rigid quarantine of all contagious and infectious diseases as directed by the rules of the State Board of Health; and it is especially ordered that no child be allowed to attend school from any house that is under quarantine.

Unanimously carried.

A bill for twenty-five dollars ($25.00) was presented by Dr. Herman Spaulding, of Chicago, for visiting, upon telegraphic request of the Secretary, Valparaiso and East Chicago, on account of smallpox.

The bill was allowed.

CLAY CITY SCHOOLHOUSE.

The following petition and correspondence was presented:

To the State Board of Health, Indianapolis, Ind.:

Gentlemen—We, the undersigned, believe it to be our duty to call the attention of your Honorable Board to the condition of the public school building in Clay City. While the building is of brick, it shakes in every wind; the walls of the exterior, also those of the interior of the building are badly cracked, owing to a poor and insufficient foundation, and the building is unsafe and dangerous.

No provisions are made for the proper ventilation or heating of the building and it is therefore very unsanitary and unhealthy, and not fit for school purposes.

It also happens to be insufficient in capacity to accommodate the number of school children of school age that should go to it and it is therefore overcrowded, thus aggravating the unsanitary conditions.

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It is not provided with sanitaries; the privies are poorly built and of insufficient size to accommodate the children, and are too filthy for description.

We respectfully submit the above facts for your consideration at the request of patrons of the schools, and ask for whatever measure of relief you can give us. The building should be condemned.

Signed by Seventeen Citizens.

On account of the petition the Secretary sent a form of sanitary survey to the Clay City Health Officer, directing that he fill the same out according to the facts. Following is the survey:

SCHOOLHOUSE AT CLAY CITY, CLAY COUNTY.

Sanitary Survey—

1. When was it built? 1882.
2. What condition of repair? Dilapidated.
3. Is it frame, brick or stone? Brick.
4. What kind of foundation? Sandstone. Very light, only twelve inches thick.
5. Is there a cellar or basement? No.
6. If there is a cellar or basement tell condition, as: Is it dry, clean, well lighted, well ventilated?
7. How warmed? Stoves in each room.
8. How ventilated? Windows and doors.
9. Are there separate cloakrooms for the sexes? No cloakrooms.
10. Are the cloakrooms warmed? No.
11. Are the stairs easy of ascent, or are they steep, winding and boxed? Steep, winding and difficult of ascent.
12. Is the ground upon which the house stands, and also the playgrounds, drained and dry? No drainage. Water always remains on school grounds after a rain.
13. How about the sanitaries? If flush closets are used, or if there are dry closets, or if privies, describe them fully, telling present conditions. No sanitary privies used. Small, poorly constructed. Too noisome to describe.
14. What is the percentage attendance? Seventy-six per cent.
15. Give amount and character of sickness in school during the year. A great deal of sickness for past two years. Smallpox, diphtheria, scarlet fever, coughs, colds, headaches, eye-strain, etc.
16. The most of the rooms are very poorly lighted also.
17. The building is not of sufficient size to accommodate the children of our town who are of school age, so that it is overcrowded or that some children are crowded out. And the building is also considered unsafe, so much so that some of the patrons have instructed their children to come home on the approach of a storm. The whole building shakes in a high wind, is unsafe, unsanitary, inadequate and wholly unfit for use.

Respectfully submitted,

J. A. MODESITT, M. D.,

Secretary Board of Health, Clay City, Ind.

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After due discussion it was ordered: That the Clay City school house is condemned and that this order of condemnation be transmitted to the school authorities of Clay City.

Adjourned.

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SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., May 6, 1901.

Present: Drs. Forrest, Davis, Cook, Wishard and Hurty. President Forrest called the meeting to order at 4 p. m.

Applications to place waste into streams were considered for the following corporations:

American Tin Plate Company at Elwood, Gas City, Anderson and Atlanta.
Consumers Paper Co., Albany.
Muncie Pulp Co., Muncie.
West Muncie Paper Co., Yorktown.
American Strawboard Co., Kokomo.
American Strawboard Co., Anderson.

These applications were fully and thoroughly considered, also all the facts as presented in the surveys made by the Secretary. Thereupon it was

Moved by Dr. Wishard, That permits are hereby given to the West Muncie Strawboard Co., at Yorktown, the Consumers Paper Co., at Muncie, American Strawboard Co., at Anderson, and Muncie Pulp Co., at Muncie, to discharge the waste from said establishments into the adjoining streams until December 1, 1901, unless sooner revoked.

Carried.

Moved by Dr. Cook, That the Secretary is directed to visit the Tin Plate Works at Elwood, Gas City, Anderson and Atlanta, also the American Strawboard Co., at Kokomo, and the United States Board and Paper Co., at Carthage, make thorough inspection and report separately and in detail to the State Board, and upon approval of the majority of the Board the Secretary is directed to issue a permit, to expire on the 1st day of December, 1901.

Carried.

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The following resolution was offered by Dr. Davis:

Resolved, That all resolutions heretofore passed, which are in conflict with resolutions or motions adopted at this meeting, are hereby repealed.

Carried.

The following resolution was offered by Dr. Davis:

Resolved, That all Health Officers under the jurisdiction of the State Board of Health of Indiana be, and are hereby notified, that, on failure to report, on or before the fifth day of each month, the deaths having occurred and duly reported to the local Health Officer, he should be discharged from office as provided by law.

Moved by Dr. Wishard, That Dr. Melville M. Haas, of Evansville, be appointed to succeed himself on the Indiana State Board of Dental Examination for two years, beginning at the expiration of his present commission.

Carried.

Adjourned.

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SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., May 28, 1901.

Present: Drs. Cook, Davis and Hurty.

It was moved by Dr. Hurty that Dr. Cook act as Chairman, and the motion was carried. The Chairman called for the reports of the Secretary of his visits to the Tin Plate Mills at Anderson, Elwood and Atlanta, also for his report of visit to plant of American Strawboard Co., at Kokomo.

At this point Dr. Wishard appeared and as Vice-President took the chair. The Secretary then made reports of visits to the Tin Plate Works at Anderson, Elwood and Atlanta, also to American Strawboard Co.'s plant, at Kokomo.

REPORT OF INSPECTION OF ANDERSON TIN PLATE WORKS' PLANT.

In accordance with the command of the Board, I visited the plant of the Anderson Tin Plate Co., May 10, 1901. The waste from this plant is carried through an underground sewer, for a distance of about 500 feet. Here it empties into a ditch in which the waste flows for a distance of about one-fourth mile, and there empties into a little run or small branch. This branch carries the waste, the same being diluted with the water of the branch, for the distance of about one mile and a half, and there it enters Killbuck Creek, and by this stream is carried a distance of probably one mile, and empties into White River.

The refuse from the tin plate works consists exclusively of "spent pickle." This "spent pickle" is a solution formed by dipping steel plates into dilute sulphuric acid. The object of dipping the plates in the dilute acid is to dissolve from the surface any iron oxide which might be clinging thereto. The action of the acid is to dissolve the iron, making ferrous sulphate, which is held in

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solution. The "pickle" finally becomes incapable of dissolving more iron, and then is allowed to flow away. It consists, therefore, essentially of a strong solution of ferrous sulphate (copperas) in water, slightly acidulated with sulphuric acid. The factory produces daily about one thousand gallons of "spent pickle." This "spent pickle" is a very excellent disinfectant and antiseptic, and I think it could be caught, and, with little manipulation, be saved as a product and sold as an antiseptic. It would also be possible to recover from this "spent pickle" the copperas which it contains and the product could be disposed of in the drug market.

The "spent pickle" flows from the underground sewer which was named above into the ditch, and at this point has not changed its nature. Gradually, as it proceeds down the ditch, a change is noticed. After it enters the branch, still further change appears, and this change consists in becoming cloudy and in depositing upon the bottom of the ditch and the branch a red powder, which is ferric oxide. Further down the branch the ferric oxide (iron rust) remains suspended in the water and imparts to it a reddish color and muddy appearance. Where the water flows from the branch into the creek, this reddish muddy appearance is increased. The creek from the mouth of the branch, from where it empties into White River, is very red and is so loaded with suspended oxide of iron as to give it an appearance which I have already designated as being red-colored and muddy. At the point where the creek enters the river the appearance described prevails, but very soon disappears after it has flowed about 100 feet.

This tin plate refuse does not and can not cause any nuisance. There is nothing putrescible about it, but, on the contrary, it is an antiseptic of the very first quality. Fish can not live in water containing much of this refuse because it is poisonous. Neither can vegetation flourish in its presence. The shores and banks of the branch, and also of the creek, are well covered with vegetation, but only at points which are untouched by the refuse. As the State Board of Health has to deal only with unsanitary conditions, and as this refuse is not unsanitary in any sense of the word, and as there is no complaint in regard to the matter, I recommend that a permit be granted to the American Tin Plate plant at Anderson to deposit its refuse into the above named streams so long as its nature is unchanged from what it now is.

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REPORT OF INSPECTION OF AMERICAN TIN PLATE PLANT AT ELWOOD.

This plant empties into a pond condensed steam from the engines and waste water from the "boshes," the rolls and the engine pits. Condensed water is nothing but distilled water, being produced by the condensation of much of the steam after it is used in the engines. The waste water from the "boshes," the rolls and the engine pits, is simply water which has been pumped from deep wells and used for cooling purposes. The amount pumped daily is estimated at 1,000,000 gallons. This water is as pure or purer than the creek water. From the pond the water flows into Duck Creek. There certainly can be no objection to placing distilled water and water that has been pumped from deep wells into any creek, and I therefore recommend that a permit be issued to the American Tin Plate Co.'s plant, at Elwood, to discharge such waste as is just described into Duck Creek.

Up to about a year ago this plant discharged all of its "spent pickle," which is a solution of copperas, into Duck Creek. The copperas is a strong antiseptic and disinfectant. It can not produce any unsanitary conditions, but it does kill vegetation, renders the water unfit for drinking purposes and will destroy any aquatic life. With the past, however, the State Board of Health has nothing to do.

REPORT OF INSPECTION OF AMERICAN TIN PLATE CO.'S PLANT AT ATLANTA.

This plant was silent from July 19, 1900, to May 13, 1901. It started the "pickling process," which is stripping steel sheets in dilute sulphuric acid, on May 20th. The "spent pickle" from this plant is all impounded. None of it is allowed to run away into the adjoining stream. The only waste from this plant is the same as found at Elwood, namely, condensed water, from the great engines and cooling water from the engine pits, the "boshes" and the rolls. This water is pure and in no wise objectionable, and I therefore recommend that a permit be granted to the American Tin Plate Company's plant at Atlanta to discharge the waste above described into Big Cicero Creek.

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REPORT OF INSPECTION OF AMERICAN STRAWBOARD CO.'S PLANT, KOKOMO.

In obedience to instructions, I visited Kokomo May 20 in order to inspect the American Strawboard Co.'s plant at that point. This plant pumps 2,000,000 gallons of water daily from four deep wells. Straw is not used, but, instead, ordinary old paper stock. This stock consists of news paper, brown paper, cut fragments of pasteboard, etc. The same is placed into large beating troughs, and, with water, is beaten into a pulp. This pulp is not washed at all, but is taken direct to the paper machine and there made into paper. The water which runs from the mill into Wild Cat Greek is that used in washing the paper in the machine rolls. No chemicals whatever are used. The plant is turning out from ten to fifteen tons of product daily.

The water enters a race just across the road from the mill, a distance of perhaps 200 feet. This race enters Wild Cat Creek about 800 feet below the mill. At the mouth of the race is situated Crutchlow's slaughterhouse, and in Wild Cat Creek at this point there was found a mass of blood and animal matter in a high state of decomposition. The mass reached about twenty feet into the water, and extended about twice that distance down the stream. The water of the creek is colored and the immediate neighborhood stunk horribly. The bottom of the creek above the strawboard plant was carefully inspected. This was also done below the point where the waste water enters. The bottom was found in both instances to be clean and free from any debris. The brownish color is entirely free from odor and has no more taste than the creek water. Samples of water were taken from the creek above the point where the race enters into it, also immediately from the chute where the waste from the plant is delivered into the race, also from immediately below where the race enters the creek, also from a point about 200 feet below the slaughterhouse. Analyses were made of these samples and are appended to this report.

The analysis of the waste from the plant shows that it does not contain putrescible substances. This is to be expected, for waste paper does not contain matters which could putrefy, and this waste could carry nothing except what it would dissolve from or wash

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off of waste paper. It is my conclusion that this waste in nowise impairs the stream, nor can it create the least nuisance. The slaughterhouse is, evidently, a pronounced nuisance, for the great mass of putrefying matter found immediately opposite the house, with its horrible stench, and the coloring of the water, indicates a nuisance of the first class. The analysis of the sample of water taken from the creek below the slaughterhouse shows abundant pollution with animal matter. It also shows animal matter in a high state of putrefaction and contains various animal toxins. The sample from the creek above the mill shows the water to be of the ordinary character found in such streams. It carries intestinal bacteria and some nitrogenous matter and is certainly not fit for drinking, but pure enough to make a stream that is pleasant and free from any objections whatever. The sample of water taken from immediately below the outlet from the strawboard plant does not show any more pollution than the sample which is taken above.

Above the strawboard plant about half a mile was found the slaughterhouse of A. D. Kelly. The slaughterhouse drains into Wild Cat Creek blood and offal which usually proceeds from such places. The stench in the immediate neighborhood is strong, and the stream is undoubtedly polluted by the matter deposited therein from said slaughterhouse. At both the slaughterhouses hogs were kept and fed upon offal. From Mr. Jackson Marrow, city engineer of Kokomo, I learn that the city has nine sewers emptying into Wild Cat Creek. Two of them are very long and quite large and the rest are short and small. Mr. Marrow estimated the number of connections at not less than 1,500. It is plain, then, that the city of Kokomo contributes very materially to the pollution of the stream by discharging sewage into the same.

Believing that the waste from the American Strawboard plant, at Kokomo, is entirely inoffensive, as it contains no putrescible matter whatever, and there is nothing suspended therein, I recommend that a permit be granted to said plant to empty waste into Wild Cat Creek so long as the present conditions exist.

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May 28, 1901.

American Strawboard Company, Kokomo, Ind.

SANITARY WATER ANALYSIS.

Samples marked "Wild Cat Creek, above the Strawboard mill, May 20, 1901."

Parts per 100,000.

Appearance—
- Turbidity ..... very slight.
- Sediment ..... very slight.
- Color ..... faint yellowish.
- Odor ..... distinct.
- Chlorine 2.0

Solids—
- Total 33.9
- Volatile 6.9
- Fixed 27.0

Nitrogen, as—
- Free ammonia 0.003
- Albuminoid ammonia 0.015
- Nitrites ..... abundant.
- Nitrates ..... traces.

Bacteriological examination—
Intestinal bacteria present.

Opinion—
This is a polluted water. It contains putrescible, organic matter of animal origin and it carries intestinal bacteria.

May 28, 1901.

American Strawboard Company, Kokomo, Ind.

SANITARY WATER ANALYSIS.

Samples marked "Refuse at point of entrance to Wild Cat Creek, Kokomo, May 20, 1901."

Parts per 100,000.

Appearance—
- Turbidity ..... marked.
- Sediment ..... marked.

Appearance—
- Color ..... none.
- Odor ..... very distinct.
- Chlorine 6.2

Solids—
- Total 103.8
- Volatile 41.1
- Fixed 62.7

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Nitrogen as—

Free ammonia	0.004
Albuminoid ammonia	0.035
Nitrites	abundant.
Nitrates	traces.

Bacteriological examination—
Intestinal bacteria present.

Opinion—
This is a polluted water. It carries putrescible matter of animal origin and carries intestinal bacteria.

May 28, 1901.

American Strawboard Company, Kokomo, Ind.

SANITARY WATER ANALYSIS.

Samples marked "Wild Cat Creek, 50 feet below point where race from strawboard plant enters, May 20, 1901."

Appearance—

Turbidity	very slight.
Sediment	very slight.
Color	slightly yellow.
Odor	distinct.
Chlorine	2.0

Solids—

Total	32.9
Volatile	5.5
Fixed	27.4

Nitrogen as—

Free ammonia	0.003
Albuminoid ammonia	0.045
Nitrites	abundant.
Nitrates	traces.

Bacteriological examination--
Intestinal bacteria present.

Opinion—
This is a polluted water. It carries putrescible matter of animal origin and carries intestinal bacteria.

May 28, 1901.

American Strawboard Company, Kokomo, Ind.

SANITARY WATER ANALYSIS.

Samples marked "Wild Cat Creek, about 150 feet below slaughter-house on same side of stream, May 20, 1901."

Parts per 100,000.

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Appearance—
- Turbidity ..... very slight.
- Sediment ..... very slight.
- Color ..... slightly yellowish.
- Odor ..... distinct.
- Chlorine 2.0

Solids—
- Total 33.3
- Volatile 6.6
- Fixed 26.7

Nitrogen as—
- Free ammonia 0.002
- Albuminoid ammonia 0.015
- Nitrites ..... abundant.
- Nitrates ..... traces.

Bacteriological examination—
Intestinal bacteria present.

Opinion—
This is a polluted water. It carries putrescible matter of animal origin and carries intestinal bacteria.

Dr. Davis moved, after the Board had fully discussed all the above reports, that permits be issued in each instance, as recommended by the Secretary, said permits to expire December 1, 1901.

The following letter from the Richmond Country Club was read:

State Board of Health:

Gentlemen—We beg to advise your Honorable Body that we have leased the John P. Smith farm, immediately west of the city, same to be used as a Country Club. A small stream, Clear Creek, runs through this farm and carries the sewage from the Eastern Indiana Hospital for the Insane. The sewage accumulates in various places, stagnates and becomes exceedingly offensive and unhealthful, especially in hot weather.

The membership of the club is over 200, and we feel that we should have some relief from this condition, and respectfully petition your Honorable Body for relief. We remain

Very respectfully,
THE RICHMOND COUNTRY CLUB,
By Board of Directors.

In regard to the above, the following resolution was introduced by Dr. Davis. Same was unanimously adopted:

Whereas, upon complaint, the Secretary of the State Board of Health, the Secretary of Wayne County Board of Health, and

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the City Health Officer of Richmond, Ind., visited the Eastern Indiana Hospital for the Insane, at Richmond, and found sewage from said asylum flowing into a small stream known as Clear Creek, and

Whereas, It was the unanimous conclusion that the inflow of said sewage from said asylum constituted a nuisance, rendering said stream offensive and unsanitary, and

Whereas, This day, May 28, 1901, a further complaint has been presented to the Board from the Country Club at Richmond, Ind., declaring the stream foul and offensive and demanding relief, therefore, be it

Resolved, That the State Board of Health of Indiana declare the said Clear Creek in an unsanitary condition and a nuisance in consequence of the sewage flowing into said creek from the Eastern Indiana Hospital buildings, and be it further

Resolved, That the Secretary of the State Board of Health is hereby ordered to serve a notice on the trustees of said hospital to abate the nuisance by making other sanitary disposition of the sewage as soon as practicable.

The following letter was then read:

Richmond, Ind., May 27, 1901.

To the State Board of Health:

Gentlemen—The Richmond Gas Manufacturing Company, or Light, Heat and Power Company, cause and permit to flow, run and drain from their gashouse, through pipes and drains, into Whitewater river, water containing quantities of crude oil, tar and other refuse matter, thereby polluting said stream, making the water unfit for stock to drink, causing a nauseating stench where raceways and dams are located, and thereby menacing public health. Fish in large numbers have been found dead at points where the water was still, at points below said gas factory, and live fish have been taken that were unfit to eat because of the strong taste and smell of oil, tar or petroleum found in them.

That this complaint may be more fully investigated, you are respectfully requested to cause an examination to be made of said drains and river, and of such witnesses as you may deem proper to call before you at Richmond.

Yours respectfully,

WILL S. ILIFF,
State Deputy Fish and Game Commissioner.

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After due consideration the Secretary was instructed to inform Mr. Iliff that the matter of which he complained did not come under the jurisdiction of the State Board of Health, but it did come under the jurisdiction of State Fish Commissioner. If the Richmond Light and Power Co. is placing into the stream any chemicals or refuse sufficient to kill fish the matter must be attended to by the Fish Commissioner.

Adjourned.

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THIRD QUARTER.

May, June and July, 1901.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., July 12, 1901.

Present: Drs. Forrest, Wishard, Cook, Davis, Hurty.

President Forrest called the meeting to order at 3:30 p. m.

The minutes of the last regular and two special meetings of May 6 and May 28 were read and approved.

Report of the Secretary for the quarter ending June 30, 1901, was then read as follows:

REPORT OF SECRETARY FOR QUARTER ENDING JUNE 30, 1901.

During the quarter the regular monthly statistics have been collected, tabulated, classified, analyzed and published as usual. The analyses printed in the April, May and June numbers of the Bulletin set forth the facts concerning mortality in the State for the periods named.

Nineteen visits were made as follows: Seventeen by the Secretary and two by Dr. Ferguson.

April 9—Greentown, account of smallpox.
April 14—Connersville, account of smallpox.
April 15—Lebanon, account of inspection of water supply.
April 20—Earl Park, account of smallpox.
April 25—Yorktown and Muncie, account of inspection of strawboard plants.
April 30—Alexandria, account of smallpox.
May 4—Fountaintown, account of smallpox.
May 7—Shelbyville, account of smallpox.
May 9—Greenfield, account of summons to court.
May 10—Anderson, account of inspection of tin plate plant.
May 10—Muncie, account of inspection of Muncie Pulp Co.'s plant.

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May 15—Elkhart and South Bend, account of smallpox.
May 20—Kokomo, account of inspection of strawboard plant.
May 24—Elwood and Atlanta, account of inspection tin plate mills.
June 1—Stockwell, account of smallpox.
June 9—Vincennes, account of smallpox. Dr. Ferguson.
June 13—Colfax, account of smallpox.
June 15—Portland, account of smallpox. Dr. Ferguson.
July 6—Columbus, account of smallpox.
July 7—Decatur, account of smallpox.

Full reports of all these visits are appended, with the exception of those concerning inspection of tin plate and strawboard plants, which have been fully reported heretofore and acted upon by this Board.

VISIT TO GREENTOWN ON ACCOUNT OF SMALLPOX.

On April 8 I received a message by telephone from Dr. Powell, Health Officer at Greentown, Howard County, saying they had what he believed to be smallpox at that point. His diagnosis was disputed and the people were very much excited and, therefore, he desired that some one from the State Board of Health should visit the place and make an authoritative diagnosis. I left the next morning, going by the way of Marion. Upon arrival at Greentown, I met Dr. Powell and also Dr. Smith, the latter being Secretary of the County Board of Health. With these gentlemen I visited several cases of eruptive disease within the corporation of Greentown and in every instance found it to be mild smallpox. We also visited several cases in the country surrounding, within a radius of about three miles. All of these cases of eruptive disease were found to be smallpox. Quarantine had already been established, but further directions were given for the proper care of the patients. A large company of the citizens met in an empty storeroom and requested that I should speak to them on the subject of smallpox. I accordingly did this, telling them briefly concerning the disease and how it might be prevented by vaccination. I have since learned that no opposition was made to quarantine and no further denial of the diagnosis after my visit. No more cases appeared because, presumably, of the efficient quarantine.

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VISIT TO CONNERSVILLE ON ACCOUNT OF SMALLPOX.

On April 13 I received a telephone message from Dr. Spillman, of Connersville, informing me that he had two cases of eruptive disease which he believed to be smallpox, but as the diagnosis was denied and as the people resisted quarantine, he requested that a State Board of Health representative be sent. I accordingly went there April 14, and with Dr. Spillman visited the cases of eruptive disease and found them to be smallpox. The opposition was relieved and quarantine easily maintained. One week after this visit Dr. Spillman was taken down with the disease himself, and it was almost one month before he was at work again.

VISIT TO EARL PARK ON ACCOUNT OF SMALLPOX.

On April 19 I received a telephone message from Dr. McMahon, who told the old story in regard to the eruptive disease which he believed to be smallpox, but which other physicians denied to be smallpox. The Mayor of the town joined with Dr. McMahon in requesting that the State Board of Health send a representative to settle the matter. I accordingly went to Earl Park, April 20, and visited the case with Dr. McMahon and found it to be true smallpox. No cases appeared after this visit and I believe it was because of the firm diagnosis and action of Dr. McMahon and, therefore, congratulate the citizens of Earl Park in the matter.

VISIT TO ALEXANDRIA ON ACCOUNT OF SMALLPOX.

On April 29 I received a telephone message from Dr. Osborne, Health Officer of Alexandria, telling of several cases of eruptive disease in the neighborhood of the city which had been variously diagnosed. He believed the cases to be smallpox and wished the advice and authority of the State Board of Health in the premises. The Mayor joined with Dr. Osborne in requesting aid from the State Board of Health. I accordingly went to Alexandria, April 30, and, with Dr. Osborne, visited several cases of eruptive disease within two miles of the corporation of Alexandria. All of the cases proved to be smallpox and the public

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declaration to that effect was made and proper quarantine established. Only two cases appeared after my visit and I believe this was due to the rigid quarantine and the general vaccination which was practiced.

VISIT TO FOUNTAINTOWN ON ACCOUNT OF SMALLPOX.

On May 3 I received a telephone message from Dr. Pierson, practicing at Fountaintown, telling of a case of eruptive disease which he believed to be smallpox, which was in the country not far from his place of residence. He requested that the State Board of Health send some one to confirm the diagnosis, as some persons disputed it and it was hard to establish quarantine. Accordingly I went to Fountaintown the next day, May 4, and visited the case, a woman of sixty-five years of age. She had been to Indianapolis and stopped at a house next to one where quarantine was being maintained on account of smallpox. Her eruptive disease was unquestionably smallpox. All of the inhabitants of the house were vaccinated and strict quarantine established. Subsequent facts proved that the vaccination was too late to prevent the disease, for every member of the family had it, but in a very mild form indeed.

VISIT TO SHELBYVILLE ON ACCOUNT OF SMALLPOX.

On May 6 Dr. Samuel Kennedy telephoned me that he had found two very suspicious cases of eruptive disease, that he was much puzzled, and would like exceedingly to have advice and aid from the State Board. I accordingly went to Shelbyville, May 7, and with Dr. Kennedy visited the cases in question. They were the children of a day laborer and plainly were not smallpox, but were unquestionably cases of impetigo-contagiosum. Dr. Kennedy is certainly to be congratulated for the care he took in this instance to make sure in the matter.

VISIT TO ELKHART AND SOUTH BEND ON ACCOUNT OF SMALLPOX.

Dr. Hill, of South Bend, telegraphed, wrote a letter and also telephoned me that there were several cases of eruptive disease in the neighborhood of South Bend, and he had heard it was at Elkhart and requested the State Board of Health to aid them.

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On May 15 I went to Elkhart, and upon investigation found two cases of impetigo-contagiosum, but no cases of smallpox. In the neighborhood of South Bend, in the country, there were found five cases of mild smallpox. These were under quarantine and all dispute as to the diagnosis was removed, and the quarantine made effective. I believe there was no spread of smallpox from these cases, although several cases have appeared in the same community since, but evidently proceeded from other infection.

VISIT TO STOCKWELL ON ACCOUNT OF SMALLPOX.

Smallpox had prevailed more or less in Tippecanoe County for several weeks, when I received a telephone message from a merchant in Stockwell, asking that the State Board of Health send a representative to settle the disputes as to what the disease was. I accordingly went to Stockwell, on June 1, and there visited five cases of eruptive disease and found every one of them to be smallpox. Quarantine had already been established and fortunately observed, despite disputes which existed in the community. Vaccination was recommended and two of the doctors of the place entered heartily into the work, and many of the citizens, young and old, were vaccinated that day. I have heard of no further spread of the disease at Stockwell.

State Board of Health:

Gentlemen—In pursuance of your instructions, I visited Vincennes, June 8. With Dr. L. M. Beches, secretary of the county board, I visited the family of George Henry, and found Mrs. Henry in the pustular stage of variola. All the other members of the family had been down with the disease and were practically recovered. I found the house under quarantine, but no guard in attendance. One member of the family had worked in a brewery, and another had worked in a basket factory during the early eruptive stage. The exposed fellow-workmen were promptly vaccinated by the city health officer. The visit was necessary to establish diagnosis, which was disputed, and in consequence quarantine was difficult to maintain.

C. E. FERGUSON,

VISIT TO COLFAX ON ACCOUNT OF SMALLPOX.

Letters had been received from Dr. Lambert, Health Officer at Colfax, requesting aid and advice from the State Board of Health in regard to several cases of eruptive disease found in his town. I went to Colfax June 13, and with Dr. Lambert and Dr. McGuire, visited five families and in every one of them found smallpox

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existing. In one family there were seven members and all had had the smallpox. In another there were five members and three had had the smallpox. The father and mother were vaccinated and had good scars and escaped the disease. In all there were fourteen cases discovered. The doubt and dispute as to what the disease was, seemed to have been removed by my positive diagnosis, and rigid quarantine was established and maintained. Vaccination was advised and was generally practiced. There has been a few cases in Colfax since my visit, but at the present date it is entirely extinguished.

VISIT TO PORTLAND ON ACCOUNT OF SMALLPOX.

State Board of Health:

Gentlemen—According to instruction, I visited Portland on the 14th inst., and in company with Dr. J. G. Ross, county health officer, called upon Mr. Wright, who was recovering from an attack of smallpox. I found that every precaution had been taken. There was a guard at the house, a nurse in the house, and a physician employed to look after the case. All members of the household had been vaccinated. The visit was necessary because of disputed diagnosis and dissatisfaction of the people.

C. E. FERGUSON, M. D.

VISIT TO COLUMBUS ON ACCOUNT OF SMALLPOX.

On July 5 I received a telephone message from Dr. Kirkpatrick, Health Officer of Columbus, Ind., giving information of the appearance of a case of suspicious eruptive disease. He was confident it was smallpox, but some of the merchants and citizens were not satisfied and one or two physicians disputed the diagnosis. He therefore requested that the State Board of Health send a diagnostician to establish the character of the disease, positively. I accordingly visited Columbus on July 6, and was taken to visit the case in question, a man about thirty-five years old who had been removed to a tent outside of the city. The case was unquestioned smallpox. The man had been taken from a miserable house where probably ten or twelve persons had been exposed. These were all placed under quarantine after vaccination. Before leaving Columbus, a number of physicians of the city, with the Mayor and other citizens, met me in public meeting in the council chamber. I was requested to give all the information I had upon the subject and any advice that might

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seem proper. The said authorities were advised to procure vaccine and offer free vaccination to all who would accept. The Mayor said this would be done. The physicians present were a unit in believing that the case in question was pure smallpox.

VISIT TO DECATUR ON ACCOUNT OF SMALLPOX.

Dr. Costello, Health Officer of Adams County, first wrote a letter giving full information in regard to several cases of eruptive disease existing at Decatur and in the neighborhood. He gave the information that all of these cases, in his opinion, were smallpox, but that the diagnosis was violently disputed. This interfered materially with quarantine and with efforts to prevent the spread of the disease. Afterward he telephoned twice and sent a telegram urging that the State Board of Health send a representative to settle the matter. On July 7 I went to Decatur by the way of Marion, and, with Dr. Costello, visited several cases of eruptive disease in Decatur, and found every one of them to be smallpox. We also visited several houses in the country, and found other cases of smallpox. In the family of a Mr. Wood, who kept a general store at Pleasant Mills, three cases of smallpox were discovered, and the father, mother and older brother, who had been vaccinated, escaped the disease entirely. At the house of a Mr. Martz, a farmer near Pleasant Mills, all of the persons had had the disease. This was evident from the history obtained and from the pittings and markings which were to be seen upon the persons concerned. At Decatur a conference was held with the Mayor and the Board of Health, several citizens of the city attending. The authorities were sure the cases were smallpox, although the City Health Officer, Dr. D. D. Clark, denied that the disease existed. He was supported in this statement by Dr. J. S. Coverdale and C. S. Clark. The very loudly expressed opinion of these gentlemen made it difficult to convince the people that smallpox existed, and that it would be necessary to take active and positive measures against it. The Mayor, however, accepted the situation and assured me that all the rules of the State Board of Health applying to infectious and contagious diseases would be rigidly enforced. The authorities were advised to purchase a formaldehyde disinfecting apparatus and an abundant amount of formalde-

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hyde, and disinfect every house that was infected. They were also advised to purchase fresh vaccine virus and offer free vaccination to all citizens.

Captain James L. Anderson was appointed to the position of Chief Clerk of Vital Statistics.

By Dr. Davis:

Whereas, The Secretary of the State Board of Health is by statute empowered to appoint all clerical assistants; therefore be it

Resolved, The Secretary has the power to suspend any employe of the Board for cause, and any employe who is suspended shall have the right of appeal to the State Board at its next regular meeting; and in case the suspension is sustained, the employe shall be discharged. During the period between suspension and final discharge no salary shall be paid.

Carried.

By Dr. Davis:

Resolved, That whenever any State Institution shall apply to the State Board of Health for water or any other analyses, the Secretary is hereby ordered to make the same at the expense of the board's general fund.

Carried.

CLAY CITY SCHOOLHOUSE.

Clay City, Ind., July 9, 1901.

To the State Board of Health:

As members of the school board for the incorporated town of Clay City, in Clay County, Indiana, would respectfully request and petition your honorable board to rescind the order condemning the schoolhouse in our town, for the following reasons, to wit:

That the present building can be repaired with but little expense, that will render it safe, if it is not safe at the present time.

That the rooms are well lighted, being five large windows to each room.

That the floors of the first story are not on the ground, but that said floors are at least twenty inches above the ground and the space between the ground and the floor is well ventilated, there being as many as twelve openings in the wall for the air to circulate. The rooms are reasonably high between joints, and no complaint as to the health of scholars who attended, and we believe the average attendance has been such for several years that it would compare favorably with the best schools of its class in the State.

That the playgrounds are high and dry and well suited for the purposes for which used, and not muddy only when the frost is coming out of the ground, at which time the soil, being clay, is somewhat muddy.

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The vaults of the privy are kept clean and disinfected and are in a good state of repair.

We believe that with the expenditure of not to exceed $1,000.00 the house will subserve its purposes until a fund can be provided for, so that with the addition of 2 per cent. levy, a schoolhouse, in all things modern, can be constructed.

The 2 per cent., the constitutional limit, provides only $7,440, which in our judgment is not sufficient by half for that purpose.

We know of no other plan that can be adopted that will provide schools for our town except to repair the present schoolhouse, to improve its sanitary conditions, that it may be useful until funds can be provided to construct a modern schoolhouse.

We are satisfied that some of the complaints or objections heretofore made to your honorable board concerning this school building have been exaggerated.

We submit these facts to you, believing you will allow us to repair the building, that schools may commence in the usual time.

Respectfully submitted,

W. H. H. ASBURY, President.

J. H. TRAVIS, Secretary.

Clay City, Ind., July 10, 1901.

State Board of Health, Indianapolis, Ind.:

Gentlemen—I hear that our School Board, or one member of same, who is adverse to any outlay for a good school here, intends to try, or has tried, to get your honorable board to permit the use of our old school building by putting a little makeshift repair to same. Enclosed you will find an impression copy of a petition to said School Board, laid before them in May last and signed by between fifty and sixty of our best citizens and taxpayers and patrons of the schools of our town. Two members of the School Board are in favor of complying with the requests of this petition. The other member is against it, and seems temporarily to control the town trustees, who adopted the adverse member's report in favor of repairing the old building, in defiance of your honorable board, and thus refusing to vote the money necessary for a new school building. The attorney for the School Board says the town trustees can not legally refuse to vote the money for a school building, so their act is null and void.

The School Board has had two architects examine the old building. One of them pronounced the building wholly unsafe and dangerous. The other gave it as his opinion that it would be inadvisable to try to repair it, as it would then stand but a few years at best, and the outlay on it would be heavy, and strongly recommended the building of a new edifice. But the opponents of this, who, in the main, have no children to send to school, persist in ignoring the order of the State Board of Health, and abuse you, myself and all the friends of a safe, healthy and suitable school building. The majority of the taxpayers and school patrons want a good school building and a good school, which, heaven knows, we need badly. All we ask is that the State Board of Health will stand by its condemnation of the old building and will not consent to or encourage its repair, as it is fundamentally bad from foundation to roof, and has been

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so pronounced by every architect that has examined, and their opinion is filed in writing with the School Board, by whom these architects were employed. I can not find time to go around and get all the signatures to this copy of our petition to the School Board again, as my brother did last May, but send it to you with a few of these signers' names, so you may see for what we asked and which two members of the three of the School Board are in favor of doing. The one who opposes has possession of the original copy, and refuses now to even let us see it, else I should have mailed it to you. I think if the State Board of Health, when they act on this matter, as I understand they are to do on the 12th, would order you to advise our School Board that if they undertook to use the old building for school purposes the Attorney-General would bring suit against them, that they would not attempt its repair, and we would get our new building and a good school. They can not do otherwise.

We leave this matter in your hands, and have no fear of the outcome, as you believe in safe, healthy buildings and a good school. We hope to hear from you, and am, very truly yours,

W. H. GUIRL.

To the Honorable Board of School Trustees, Clay City, Indiana:

Gentlemen—Whereas, Present school building of our town has been condemned as unhealthy and unfit for use for school purposes by the State Board of Health, and has been condemned as wholly unsafe and dangerous by competent architects; and

Whereas, The secretary of the State Board of Health has advised your honorable body that the Attorney-General of the State would bring suit against the school board if an attempt was made to use the old building for school purposes, thus involving the town in expensive litigation and hurtful notoriety; and

Whereas, We believe it to be for the best interests of our town and township that Clay City be provided with a first-class building, sufficient and ample for the needs of a first-class graded common school, and sufficient and ample for a commissioned high school as well; therefore, be it

Resolved, That we, the undersigned citizens, taxpayers and patrons of the school, unite in petitioning your honorable board to ask the trustees of the town of Clay City to provide the necessary funds by a bond issue and the issue of warrants, to purchase the three (3) Oberholtzer lots lying east of the old school building on White Street, and to erect a new school building, modern in style, construction and sanitary provisions, and sufficient in size to accommodate a graded school and a commissioned high school, and to anticipate the growth of the community to whatever extent your board may deem wise.

We, the undersigned petitioners, think it very bad business policy, and in the long run a waste of taxpayers' money, for the board to undertake to use any part of the old school building, because of condemnation by authorities and because the foundation is too low. We would not oppose the use of any good brick that may be found in the old building, but do not believe any other material there ought to be put in a new building.

In conclusion, it is the sense of the signers hereto that the new school building should provide rooms and facilities for a commissioned high school as provided by law.

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We believe, too, that all possible expedition should be used in securing suitable plans and letting the contract for the building and in its construction, in order that our children may not be without school privileges for the coming school term.

We have at heart the good of our town for the present and future, and believe that it is our duty, first of all, to give our children the advantages and training of a moral and literary education. The common schools are the hope of our town and country.

Signed by Fifty Citizens.

Clay City, Ind., July 12, 1901.

Indiana State Board of Health:

Dr. J. A. Modesitt has just handed me your letter of the 11th inst., and I note what you say with reference to Mr. W. H. Asbury's communication, and as to his statement that it is a "financial impossibility" for the town of Clay City to build a new school building, the fact of the matter is that Dr. Asbury and other members of the Board of School Trustees know that this is not true. The School Board has a written opinion from the best legal mind in Clay County that a school building can be built and the money raised by an issue of bonds amounting to $7,440, which is all we can raise in that way under the constitution, then the warrants of the town can be issued for the remainder of the money and discounted. If they could not get anybody else to build a schoolhouse in this way, I would undertake gladly to do it myself and take the paper in payment. The fact is, these people haven't any children to send to school. They don't care anything about schools, and they are determined unalterably that we shall not have a new school building here, and make any kind of statements and claims to bolster up their desires. As I have said before, the School Board has in its possession from its attorney, to whom they went on my advice, a written opinion that there is no trouble at all about building a new schoolhouse from a financial point of view. There is a lot of nasty, dirty, pothouse politics underneath and back of this statement and letter of Asbury's, and that is all there is in it. If the State Board of Health stands by us, and I have not the least doubt that it will, these people will be forced to give us a new and good school building, and I do not doubt the issue for one moment. The State Board of Health, in my judgment, should, through you, advise these people that the Attorney-General will bring suit against them if they undertake to use the old building for school purposes under any circumstances, repaired or otherwise.

I thank you for your letter of the 11th, and the interest you take in the matter and for your sympathy in our efforts to get what the citizens of Indiana are supposed to have, namely, a school building that will not fall down on our children or cause them sickness.

I hope to hear from you again, and am, very truly yours,

W. H. GUIRL.

Whereas, A petition signed by W. H. H. Asbury and J. H. Travis, of the Clay City School Board, asking the State Board of Health to rescind a former order of condemnation of the Clay City schoolhouse, has been received and duly considered; and

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Whereas, There has been also received a petition signed by a number of citizens of Clay City urging that the former order of condemnation be sustained, therefore, be it

Resolved, The State Board of Health does hereby sustain its former action condemning the Clay City schoolhouse.

Unanimously carried.

Indianapolis, Ind., July 11, 1901.

State Board of Health:

Gentlemen—At the request of citizens and J. P. Johnson, trustee of Washington township, I made an inspection of school buildings Nos. 8 and 10 in said township, and found the following conditions:

These buildings were constructed about forty-five years ago. The foundations were crumbling and full of holes. The buildings are badly out of repair and dilapidated. A new floor has been put on top of the old one in No. 10, and the old floor in No. 8 is in bad condition. The roofs of both buildings are badly decayed. The ceiling in No. 10 is now and has been propped up for several years and the flues of both buildings are actually dangerous, being constructed on the ceiling joist. The windows are not hung on weights, the upper sash being stationary, so that it is impossible to properly ventilate the room without subjecting the pupils to draft of air. The plastering is very old and broken. Light and heating are unsanitary in the extreme. I am creditably informed that average attendance at these schools last year was only seven or eight pupils. These can be transferred and much better cared for at Broad Ripple and Nora, where there are new and much better equipped buildings. Considering the age and sanitary condition of these buildings, they are certainly unfitted for the purpose they were intended, and I therefore recommend that they be condemned for school purposes.

Yours very respectfully,

H. W. RIDPATH, Secretary.

After due consideration, the Secretary was directed to inspect personally the schoolhouses named by Dr. Ridpath, at his earliest convenience, and if he found them as reported, and if, in his opinion, they were so unsanitary as to be unfit for school use, then the same are hereby condemned, and the usual order of condemnation should be issued and served.

SCHOOLHOUSE, DECATUR COUNTY.

State Board of Health, Indianapolis, Ind.:

Gentlemen—This communication is in relation to the condemnation of a room now being used as a schoolroom in school district No. 8, Sandcreek Township, in the town of Letts, Decatur County, Indiana, G. W. Fraley, trustee.

The majority of the patrons of this school have petitioned the township trustee to build an addition to the present school building. The

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trustee made requisition on Township Advisory Board for an appropriation to build the addition asked for. The advisory board refused to provide the funds for that purpose.

The trustee made a request, which was recommended and approved by the county superintendent, that the secretary of the County Board of Health inspect the said building and take such action as might be necessary to condemn it. This matter was referred to the State Board of Health for advice. A communication from the State Board of Health, bearing date of June 11, was duly received, which says:

"We are informed by the Attorney-General, and have already followed his instructions in every instance, that it is within the power of the State Board of Health to condemn and close unsanitary schoolhouses. The county health officer should inspect the schoolhouse and make a description of its condition; to this should be added the testimony of any of the patrons of the school or of any officers who are willing to give testimony, and also the health officer's conclusion and recommendations.

"Please, therefore, at your earliest convenience, proceed to the schoolhouse in question, in person, make an inspection and report as above outlined, and do not fail to add your recommendations."

Under the above instructions and order, I visited the schoolhouse complained of, and the following conditions were found on investigation:

The main school building contains two rooms and an ante-room, or entrance, on each side of which there is a cloak room the full length of the entrance, well arranged and commodious. From this hall, or entrance, you can enter either room. The schoolrooms proper are 28x36 feet, sixteen-foot ceilings. Each room is lighted by large windows on three sides, which extend to within four feet of the ceilings. These windows are screened, let down from the top, and can be raised from the bottom, with curtains.

The building is of brick, with a stone foundation, eighteen inches high, slate roof, belfry and sightly appearance. Stands 150 feet back from the public highway—a pike—fronting the north, in a lot containing about two acres. There is a stone pavement leading from the road to the front door.

The surface water runs from the house on all sides. There are no pools of water, low ground, or other surroundings that would favor disease. There are small shade trees along the pavement.

There are no objections raised to the rooms described, except as to the heating, which is by two large stoves, burning wood or coal. These stoves do not heat the rooms so the pupils are comfortable in all parts of the room.

There are 114 pupils enrolled in this school and 630 in the township. The village of Letts is very near the center of the township, and contains about 250 population. The school is a graded school, and must admit scholars of the higher grades from other portions of the township when application is made for admission. There is not room enough in the two rooms described even for the pupils enrolled in this school.

A former township trustee provided for an emergency by constructing for temporary needs a room 16x20 feet. This room is built in front of the main building, is resting on stone pillars at each end between corners, the space being hidden by plank tacked to the walls of the house. It is

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weather-boarded with "shiplap" and neither lathed nor plastered. The inside of the walls, and also the ceiling, is lined with paper. There are evidence that the paper ceiling and walls have been wet by the rain or snow. The wind comes up behind the narrow baseboards and through the floor and attic. The paper is separated at the joints of the walls and ceiling and is torn in places.

In this small room there are nineteen desks. This so crowds the room that there is barely passageway for the scholars to enter or retire from the room. It is, in capacity, inadequate for the accommodation of the pupils of either of these grades, and, necessarily, is a disturbance to the scholars in the other rooms in their recitations.

There is a small window in each side of the room, except the side next to the main building. There is one entrance. Owing to the fact that there is neither plastering nor other proper protection against the cold, rain and dampness, it is not possible at times for the room to be kept comfortable, or in a healthful condition. This room is also heated with one wood stove, which must be near one end of the room, and while pupils near the stoves may be too hot, those farther away are cold. This room was built with the intention of using it for a woodhouse, as soon as a more appropriate room could be provided.

I have no hesitancy in saying that the last described room is unfit for use as a schoolroom, from the conditions described.

Sand Creek Township has property of assessed value worth $961,294, without indebtedness.

The architect's estimate for one additional room, on the ground, with cellar and furnace, cloakrooms, etc., sufficiently large for present and probably future uses, all complete, would be about $2,650.

This expenditure would afford sufficient room and heating for the entire building, and make it possible for the trustee to comply with the requirements of Act S. B. No. 73, p. 27, Appendix School Laws, 1899.

All of which is most respectfully submitted,

JOHN H. ALEXANDER,
Secretary Decatur County Board of Health.

I enclose the petition of the patrons of the school, the request of the Township Trustee, endorsed by the County Superintendent, also a letter of a teacher in the last winter's term, for your consideration, which will perhaps fill the requirements of the instructions from the Attorney-General's office.

J. H. A.

Greensburg, Ind., July —, 1901.

To the Board of Health:

Having taught one term at the Letts Corner school, I would say the following concerning the building there:

The two larger rooms are too large to heat with stoves. The small one built supposedly for temporary use, was built hastily and was never plastered. Building paper was nailed to the inside of the weather-boarding to keep out the wind, and the ceiling was simply paper nailed to the joists. Around the room was a baseboard, behind which filth was bound to accumulate, as it was impossible to sweep behind it. On blustery, snowy days, the snow blew in through the cracks around the window

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casing. The scholars who sat near the windows stuffed the cracks with paper to keep out the snow.

The room is about twenty feet long by sixteen feet wide, and contains eighteen seats, a stove and a teacher's desk. The seats along both sides were against the wall. Neither was there any space behind the seats in the rear of the room. The seats extend so near the front that two persons can scarcely pass in front of them.

It is easily seen that the room was crowded when none but the regular scholars were in it. As I taught four grades, it was necessary to have the other grades sit in one of the larger rooms and come to the smaller one to recite. This being the case, there were from twenty-five to thirty-four pupils in the small room nearly half the time. It was, of course, necessary to open and close the doors of both the rooms numerous times each day, thus making it hard to keep them warm. As the weather-boarding is thin, it was hard to heat the small room under the most favorable circumstances. Some were hot while others were cold.

Owing to the above conditions, the teacher who taught there prior to myself was constantly in ill health. I also know pupils who were sick from the same cause. And one child remained in the same year two years as a result of sickness caused by the poor sanitary condition of the room.

The above statements are not overdrawn, and a look at the building will convince any one of its unsanitary conditions. This, coupled with the fact that a great per cent. of the pupils are away from the teacher to whom they recite except during recitations, makes it impossible to accomplish the best results in school work.

Respectfully,
DWIGHT A. MURPHY.

Greensburg, Ind., June 5, 1901.

Dr. J. H. Alexander, Secretary County Board of Health Decatur County, Greensburg, Ind.:

Dear Sir—We beg leave to call your attention to the school building in District No. 8, Sand Creek Township, Decatur County, Indiana, known as the Letts Corner School. I believe the building needs the addition of a new room, and of a better heating and ventilating system. The building as now constructed, consists of two rooms of brick, each about 36x26 feet inside and 16 feet high, and one temporary frame room about 16x20 feet. The brick building is heated by one stove in each room. Each room has windows on three sides, windows extending to within about four feet of ceiling.

The frame structure is boarded on outside and covered with paper on inside, without plastering. It is small, poorly lighted and poorly ventilated. Only one-half of pupils in that room can be seated therein, others being compelled to pass in from another room for recitation purposes, making the room closely crowded during half the day.

There are 114 pupils enumerated in the district, with an attendance of about 100. Three teachers are employed. I respectfully ask that you investigate the conditions from sanitary point of view and recommend such changes as you see fit.

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Fifty patrons of the district have petitioned the Trustee of said township and the Advisory Board, asking for an appropriation to cover expense of erecting a new room. The Advisory Board have refused to grant the request of petitioners. Said petition accompanies this request. I also ask you to investigate the condition of the well and quality of drinking water.

Most respectfully,

G. W. FRALEY,
Trustee of Sand Creek Township.

I endorse the above recommendations.

ELMER C. JERMAN,
County Superintendent.

To Geo. W. Fraley, Trustee Sand Creek Township, Decatur County, Indiana, and the Advisory Board:

Whereas, The little frame building used as a schoolroom in District No. 8, situated in Letts, is incommodious, uncomfortable and in every way insufficient for the needs of the children who occupy it; therefore,

We, the undersigned voters and patrons of said district, petition you to build a room that will meet the requirements and comforts of the children who may occupy it.

Signed by Fifty Citizens.
Trafalgar, Ind., June 18, 1901.

Dr. J. H. Alexander, Greensburg, Ind.:

Dear Sir—I wish to write to you just a few words with reference to the school building at Letts. I was principal of the school there for two years and am well acquainted with the conditions of affairs existing there.

The last year I was at Letts the actual attendance reached 115. That year, to the original structure of brick, consisting of two rooms, a small frame building was annexed. This frame annex is in size about 16x20 feet, poorly lighted, heated and ventilated. It is lined with building paper, in lieu of plaster, and has little or no underpinning. In mid-winter the atmosphere, about four feet from the floor, may reach a temperature of 90 degrees, while at the floor it is not above 40 or 50 degrees.

This room was originally intended for recitation purposes only, but later, owing to the crowded condition of the other rooms, it was furnished with about fifteen desks. Hence, when a class enters from the other building for recitation, this small, poorly ventilated room contains from twenty-five to thirty pupils.

This room is connected to the main building by a small hall or "anteroom" through which each class must pass in going to and from recitations. You, who are a physician, are better able to judge of the effect in cold weather of this frigid change of temperature upon the health of scantily clad children than I. Each of the rooms in the main building is large enough to accommodate about thirty-five or forty pupils. When I was there the actual attendance in my room reached fifty-nine and in the primary room forty-five. To make seating capacity, desks were so crowded together that a pupil could not stand and work at the front blackboard and leave sufficient room behind him for a class to pass out to recitation, and the aisles were narrow in proportion.

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Investigation will show that the Letts school has lost much time in the last two years from infectious diseases. I firmly believe that the wretched accommodations afforded are to blame for much of it.

The patrons there are contending with a parsimonious advisory board for a new room. I earnestly trust that you will take the matter in your hands and do for them all that your office, as Secretary of the County Board of Health, empowers you to do.

Very respectfully yours,

ORAN E. BURTON.

Letts, Ind., June 18, 1901.

J. H. Alexander, Secretary Decatur County Board of Health:

I have been a practicing physician in the town of Letts for two years and a half and have examined the school building and found it in a very poor sanitary condition. The lack of space for comfortable seating, improper ventilation and poor facilities for heating are greatly to be deplored.

The small frame building has none of the necessary qualities of a comfortable room and should be condemned and closed. I realize that from a financial standpoint it would be much better for me to have the building remain as it is, but for the good of the community I would insist on an improved condition.

Respectfully,

J. A. WELCH, M. D.

After due consideration of the documents concerning the Letts schoolhouse, the following action was taken:

Whereas, It has been shown by abundant evidence that the frame schoolroom attached to the schoolhouse in District No. 8, Sand Creek Township, Decatur, Ind., known as Letts Corner School, is very unsanitary and a threat against the health of the pupils; and

Whereas, The ventilating and heating of the two rooms of the original structure are so poor and insufficient as to constitute an unsanitary condition which is a threat against the health of the pupils, therefore it is

Ordered, The frame room attached to the schoolhouse, District No. 8, Sand Creek Township, Decatur County, Indiana, known as Letts Corner School, is hereby condemned for school purposes, and the Trustee of said township is forbidden to use or permit to be used for school purposes said frame schoolroom; and it is also

Ordered, That the original two rooms of the schoolhouse, District No. 8, Sand Creek Township, Decatur County, Indiana, known as Letts School, shall not be used for school purposes unless

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the same are warmed and ventilated by an apparatus which will maintain an even temperature of not less than 70° F. during zero weather, and which will change the air in each room at least four times each hour; and it is further

Ordered, Because necessary for the health of the pupils, that not less than twelve cubic feet of space shall be provided for each pupil. The County Health Officer of Decatur County shall see that this order is served, and; in case of failure of the Trustees to obey each and every one of the requirements herein set forth, the said officer shall immediately inform the State Board of Health that suit may be brought by the Attorney-General to compel obedience and enforce the penalties of the law.

Passed in regular quarterly session of the State Board of Health, July 12, 1901.

State Board of Health, Indianapolis, Ind.:

Gentlemen—We, citizens of West Baden, Ind., wish to call your attention to the notorious nuisance, "The West Baden spite wall." It is a stone structure four feet thick, let into the ground from six to eight feet, cutting into and through sewers, blocking up the mouth of same. The wall is about eight feet above the surface and 600 feet in length. The town of West Baden is built on a hillside. This wall is at the foot of the hill. It has not only destroyed all sewers, but it spans the natural drainage of the town, and with every dashing rain that falls all of the filth from the closets above (a great many of which are built without any vaults), the garbage thrown out into the back yards and alleys, together with all other filth of the town, is driven down against this wall, which forms a dam. Thence into cellars along the line, keeping them filled with this foul water, floors damp, mould accumulating on furniture and stock. Rooms filled with foul air are offensive at any time, so much so that upon opening up in the morning it is necessary to throw open the doors and step outside the house until the draught has partly driven out the stench. Along the wall the stench is as foul as the worst kept closet. This wall was built by the Monon Railway Company one year ago last November.

The increase of disease since then has been alarming. Malaria, in all its forms, has increased. Typhoid, a disease not known in the history of West Baden until after the construction of this wall, has been very prevalent, with several deaths. The people of West Baden and vicinity petitioned the Monon officials, with quite a long list of signers, to abate this nuisance, which was treated with silent contempt. Then we applied to the Orange County representatives of Board of Health, who came down and looked around and that was all. There was nothing done.

Very recently the railroad company raised their track in with stone, giving the water still less chance to flow away from the buildings and at the same time making no provisions whatever for drainage.

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The water stands in the cellars the year around and is foul to start with. Standing, as it does from year to year, a frog would die in it. The health of our people demands an immediate relief from this nuisance, and we, the undersigned citizens of West Baden, earnestly and respectfully ask that your honorable Board take such action as will insure immediate relief from said nuisance.

Signed by Sixty-four Citizens.

In regard to the petition from West Baden concerning a wall built by the Monon Railway Company, it was

Ordered, That the Secretary should, as soon as possible, visit West Baden, make a sanitary survey, and if, in his opinion, a nuisance or unsanitary condition was caused by the wall complained of in the petition, he should communicate with the railroad authorities and try to secure abatement of the conditions constituting a nuisance of causing unsanitary conditions; and finally make full report of what may be done.

By Dr. Davis:

Resolved, Whenever any State Institution shall apply to the State Board of Health for water or other analyses, that the Secretary is hereby ordered to make the same at the expense of the general fund.

Carried.

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FOURTH QUARTER.

August, September and October, 1901.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., October 11, 1901.

Present: Forrest, Hurty, Davis and Cook.
President Forrest in the chair.
Dr. Wishard being ill, was excused from attendance.
Minutes of last meeting read and accepted.

SECRETARY'S REPORT FOR THE QUARTER.

The mortality statistics for the quarter will be found, as usual, in the Monthly Bulletin. The Bulletin also contains an account each month of the smallpox reported. Compared with last year, the same quarter shows less smallpox. The reports gave for July 60 cases of smallpox and 1 death; August, 100 cases, no deaths; September, 52 cases, 1 death. Both deaths in the quarter occurred in Daviess County. The usual comment must be added that many mild cases have probably been called chickenpox, and therefore do not appear in the record.

Owing to the fact that more clerical work is now done by the Chief Clerk of Vital Statistics, and also of greater interest and efficiency of the old members of the force, it was found possible to dispense with the services of one clerk. Accordingly, the last person employed was informed her services would not be required after the middle of the month.

VISITS OF THE SECRETARY.

The Secretary made visits during the quarter as follows:

July 15—Elkhart, account smallpox.
July 17—Gas City, to inspect tin-plate mill.

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July 20—Anderson, to inspect strawboard plant and American Steel and Wire Co.
July 25—Plainfield, to inspect Boys' Reformatory, account of typhoid epidemic.
August 1—Letts Corner, account unsanitary schoolhouse.
August 2—Cataract, account unsanitary schoolhouse.
August 8—Aurora, account smallpox.
August 13—Daleville, account farmers' meeting, to consider pollution of streams.
August 17—Warsaw, account of suspected smallpox and to advise concerning sewers.
August 21—Danville, account of smallpox.
August 26—Rome City, account unsanitary conditions.
September 3—Oldenburg, account epidemic typhoid fever.
September 24—Lovett, account dedication of sanitary schoolhouse.
September 25—Jeffersonville, account of typhoid fever in the State Reformatory.
September 30—Union City, account of smallpox.

Detailed reports of these visits are appended.

ELKHART.

Elkhart was visited July 15, in obedience to a request of the Health Officer, Dr. Hoopengarner, who reported several cases of smallpox, and said a few physicians denied his diagnosis. He further stated that the city authorities and certain newspapers opposed publicity and preventive measures. In consequence of all this, he desired help from the State Board. Upon arrival at Elkhart, I visited six cases of eruptive disease, and all were unquestionably smallpox. The city authorities were called upon and assured the disease was smallpox, and their duties in the case made clear. The local Health Officer was then instructed to rigidly enforce the rules of the State Board of Health. Dr. Hoopengarner is entitled to commendation on account of the firm stand he took and the good work done.

CONCERNING THE TIN PLATE MILL AT GAS CITY.

To the Honorable, the State Board of Health of Indiana:

State of Indiana, Madison County, ss:

American Tin Plate Co., a corporation owning and operating a manufacturing establishment at Gas City, Ind., known as Morewood Works, requests permission to discharge from said works into the Mississinewa river "spent pickle" and waste from boshes, rolls and engine pits.

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It now represents that the said Mississinewa river is at such a stage that such "spent pickle" and waste may be discharged into it without injury to the public, and it prays your honorable board to grant and issue to it—American Tin Plate Co.—a written permit, allowing it to discharge such "spent pickle" and waste into said river aforesaid, and that your honorable body do hereby grant such permit.

AMERICAN TIN PLATE COMPANY,
By BERTHOLD GOLDSMITH,
District Manager.

State of Indiana, Madison County, ss:

Berthold Goldsmith, being duly sworn, says that the facts stated in the above petition are true, as he verily believes.

Subscribed and sworn to before me, the undersigned, a Notary Public, on this the 17th day of April, 1901.

CLARK A. PRICE,
Notary Public for Madison County, Indiana.

My commission expires June 15, 1903.

VISIT TO GAS CITY TO INSPECT TIN PLATE PLANT AT THAT PLACE.

The visit was made July 17. The "spent pickle" from this plant is discharged directly into the Mississinewa River, after mixing it with the condensed water and cooling water from the boshes. For a considerable distance down the stream the water is unsightly because of the iron oxide formed by decomposition of the pickle. As before reported in connection with other tin plate mills, "spent pickle" is a stringy solution of copperas in water. This is produced by stripping the sheet steel in dilute sulphuric acid so the molten tin will coat it. The copperas and oxide of iron (rust) which attends the decomposition of the copperas, do not produce unsanitary conditions, but both will kill fish and vegetation. The destruction of vegetation at the edge of the stream is no loss, and several merchants at Gas City and Jonesboro freely express the opinion that the loss of the fish can well be afforded if necessary to secure the mill. At one time a pond existed at this mill into which all liquors were discharged. At the time of my visit the dyke around the pond was broken and all liquors from the mill flowed into the stream. I recommended that a pond be constructed and that all "spent pickle" be discharged therein, and said if this were done I would ask the State Board of Health to grant a permit to discharge the condensed water and water from the boshes directly into Mississinewa River. This promise was

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given by the Superintendent of the mill, and in accordance with a resolution of the Board empowering the President and Secretary to act, if no injurious refuse were to be discharged into the stream, the following permit was issued:

Whereas, The American Tin Plate Company, a corporation owning a tin plate plant at Gas City, Grant County, Indiana, has heretofore filed with the Secretary of the State Board of Health of Indiana its verified application in writing, asking permit to discharge into a stream in said State known as the Mississinewa River certain waste water from the rolls, engine pits and boshes, and showing in such application that said stream was, at the time of filing and making said application, at such stage as that such waste water might be safely discharged into said stream without injury to the public, and,

Whereas, Said State Board of Health has duly inspected said stream above, at and below the point where said waste water enters Mississinewa River and has found and finds that said waste waters may, for the period hereinbelow fixed, be safely discharged into said stream without injury as aforesaid, and furthermore, finding that said waste water is surely as pure as the waters of the Mississinewa River; now,

Therefore, Said the State Board of Health hereby grants and issues this, its written permit, hereby granting permission to said American Tin Plate Co. to flow and discharge the waste water from the rolls, engine pits and boshes of its plant at Gas City into the Mississinewa River for a period extending from the date hereof to the 1st of December, 1901.

This permit is given this day, May 27, 1901, by the State Board of Health.

SCHOOLS Nos. 8 AND 10, WASHINGTON TOWNSHIP, MARION COUNTY.

Report of Sanitary Survey of Schoolhouse No. 10, of Washington Township, Marion County.

In accordance with the orders of the State Board, I made sanitary inspections of Schoolhouse No. 10, Washington Township, Marion County, Indiana. The building was constructed in 1855, is frame, dilapidated, foundation very bad, bad roof and the ceiling propped by poles. It has four windows on each side and

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all of them are in such poor repair they can not be moved. The room is warmed by an ordinary stove, and the flue is in a very bad condition. There are no special provisions for ventilation and the air can only be changed by the doors and windows and not by the latter unless they are repaired. The seats are old style and many are broken, the blackboards are warped but are a dead black. The outhouses are separate, but are dilapidated. The water supply is from a dug well and the same, in my opinion, is not pure and wholesome. No analysis was made. This schoolhouse is about one and one-half miles east of the town of Nora and at said town there exists a modern brick schoolhouse, sanitary in every particular. It would be cheaper to transport the pupils to Nora, where there is abundant room, than to care for them in a new schoolhouse which might be built to replace No. 10. The enrollment is 15, with an average attendance of 8. I recommend that the schoolhouse be condemned as unsanitary and unfit for school purposes.

Report of Sanitary Survey of Schoolhouse No. 8, of Washington Township, Marion County.

In obedience with the orders of the State Board, I made a sanitary survey August 7, 1901, of Schoolhouse No. 8, Washington Township, Marion County, Indiana. This house was built in 1855. It is frame and badly dilapidated. The foundation is brick and is crumbling and is broken in many places. The door enters the room directly, which is unprovided with cloakrooms. There are four windows on each side, but in such bad repair they can not be moved. No special means of ventilation have been provided and the room is warmed by an ordinary stove. The blackboards are of slate and acceptable in every particular. The seats are new and are of different sizes for small and large pupils. The roof is in good condition and the water supply, being from a deep well with good pump, is very probably pure and wholesome. There are separate outhouses, but the same are dilapidated and in very bad condition. The enrollment at this schoolhouse is 16, the average attendance 9, and the distance from Broad Ripple, where a fine modern, sanitary school building exists, is one and one-half miles. As the sanitary conditions of this schoolhouse are very

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poor and the only way to relieve the bad surroundings would be to build a new building, I therefore recommend that this schoolhouse be condemned.

Mr. J. P. Johnson, Trustee, Broad Ripple, Ind.:

Dear Sir—We enclose herewith official notification to you of the condemnation of Schoolhouse No. 8 and Schoolhouse No. 10, in Washington Township. Unless these buildings are thoroughly remodeled and made sanitary, they can not be used for school purposes. The penalty for disobedience of this order is a fine of not less than $10 nor more than $100.

SECRETARY.

CONDEMNATION.

Whereas, It has been shown by full reports of the State Health Officer, that the schoolhouse known as School No. 10, Washington Township, Marion County, Indiana, is unsanitary and unfit for school purposes;

Therefore, The State Board of Health formally condemns said schoolhouse, declaring it unsanitary and unfit for school purposes, and commands the Trustee of Washington Township, Marion County, Indiana, not to use said schoolhouse for school purposes, under pain of prosecution, as provided in the statutes of Indiana.

Passed August 17, 1901.

CONDEMNATION.

Whereas, It has been shown by full reports of the State Health Officer and the Marion County Health Officer, that schoolhouse known as School No. 8, Washington Township, Marion County, Indiana, is unsanitary and unfit for school purposes;

Therefore, The State Board of Health formally condemns said schoolhouse, declaring it unsanitary and unfit for school purposes, and commands the Trustee of Washington Township, Marion County, Indiana, not to use said schoolhouse for school purposes, under pain of prosecution, as provided in the statutes of Indiana.

Passed August 17, 1901.

September 3, 1901.

Mr. P. M. Deford, Broad Ripple, Ind.:

Dear Sir—You ask information concerning the condemnation by the State Board of Health of Schoolhouse No. 10 in Washington Township, Marion County, Indiana. This schoolhouse was condemned because it was unsanitary and conditions exist which are a menace to the health

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of the pupils. It follows that if all unsanitary conditions are removed that the condemnation will then be without force. If the schoolhouse is put in good repair, made safe in every way, and if a vestibule is built by the front door, and if a ventilating heater is provided, and if adjustable curtains are placed at the windows, then the unsanitary conditions which now prevail will be abolished.

We understand the school will commence next Monday. At this time of the year, when windows and doors are all open, and when fires are not needed, the ventilating heater, even if it were in the building, would not be used, and, therefore, it is not necessary to have this heater at hand when the school is opened, but it must be in place, ready to do its good work by the time it is necessary to heat the building. It will be further necessary to supply either glass drinking cups or graniteware cups, and permit the children to pump their drinking water direct from the well. This will make it possible to rinse the cup each time in the flowing stream and thus obviate the possibility of transference of disease by spittle from one pupil to the other. The pump must also be supplied with ample facilities for draining away the waste. Also dry paths must be provided, leading to the outhouses.

Hoping that this explanation makes the whole situation plain to you, I am, very truly yours, SECRETARY.

Mr. William Shirts and Mr. Volney J. Dawson:

Gentlemen—You ask me the following question and request an answer: "Is it necessary that the State Board of Health rescind its order of condemnation of School No. 10, Washington Township, Marion County, Indiana, before anything may be done to improve the sanitary conditions?"

To this we reply "No." Indeed, we can not remove the condemnation until the sanitary conditions are fully supplied. Where this is done the condemnation itself will no longer have force.

Hoping this answer is satisfactory, I am, very truly yours,

SECRETARY.

September 7, 1901.

Mr. Granville S. Wright, President Advisory Board, Washington Township, Marion County:

Dear Sir—You ask me to answer the following questions:

No. 1. What must be done in order to put Schoolhouse No. 10, Washington Township, Marion County, in sanitary condition?

No. 2. Will the school authorities be liable to prosecution by the State Board of Health if Schoolhouse No. 10, Washington Township, Marion County, is used for school purposes just as it now is, during the open, pleasant weather? Or will prosecution be delayed until cold weather, thereby giving time and opportunity whereby we will be able to secure proper sanitary conditions?

In answer to question No. 1, I will say: Provision must be made whereby an even warmth of 70 degrees will be maintained in zero weather; also provision must be made whereby the air in the schoolroom will be

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changed four times every hour. It is suggested that the best way to secure these conditions would be to purchase a ventilating heater of ample size. The windows must be made tight, and permitted to be raised and lowered, the roof must be made tight and the ceiling made safe. The present double floor should be looked after as follows:

The top floor should be taken up, the lower one scrubbed with lye and hot water, and a layer of tar paper placed upon it; and, lastly, the top floor should be relaid. A vestibule must be built and dry paths to the outhouses provided.

To question No. 2 I will say: There is a special order requiring the executive officer of the State Board of Health not to bring action in the courts until it is plain that the school authorities will not and intend not to provide proper sanitary conditions: Provided, If the conditions are not met by the time cold weather begins, then prosecution shall be brought.

Under this order it is admissible to hold school in Schoolhouse No. 10 as it now stands until cold weather begins, any order of condemnation to the Trustee to the contrary notwithstanding. I will further say that under the orders of the State Board of Health, giving the executive officer the privilege of using his own discretion, that no action be brought until it is plainly apparent that the school authorities of your district do not intend and will not comply with the order of the State Board of Health.

Very respectfully,

SECRETARY.

VISIT TO ANDERSON ON ACCOUNT OF COMPLAINT AGAINST THE AMERICAN STRAWBOARD COMPANY.

COMPANY'S PLANT AT THAT POINT.

This visit was made July 20. A provisional permit was given this plant on May 6, 1901. At the time of this inspection (my coming was not announced) the provisions were not being violated. Only waste water was discharging into White River. The concentrated liquors directly from the rotaries was being used over and over and lastly impounded, as directed in the permit. The wash water was slightly colored, but certainly did not carry any pollution. I therefore report that in my opinion the Board's permit is being observed strictly by this plant management and that no harm is being done to the stream.

AMERICAN STEEL AND WIRE COMPANY, ANDERSON.

To the State Board of Health of Indiana:

State of Indiana, Madison County, ss:

The American Steel and Wire Company, a corporation owning and operating a manufacturing establishment at Anderson, Ind., requests permission to discharge from said works into Greens Branch "spent pickle."

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It now represents that the said Greens Branch is at such stage that such "spent pickle" and waste may be discharged into it without injury to the public health, and as it is a strong disinfectant, rather to the advantage of the public health, it prays the State Board of Health to grant and issue to it, American Steel and Wire Co., a written permit, allowing it to discharge such "spent pickle" and waste into said river aforesaid, and that the State Board of Health do hereby grant such permit.

AMERICAN STEEL AND WIRE CO.,
By CHAS. GAUS.

State of Indiana, Madison County, ss:

Chas. Gaus, being duly sworn, says that the facts stated in the above petition are true, as he verily believes.

Subscribed and sworn to before me, the undersigned, a Notary Public, on the 10th day of August, 1901.

Notary Public for Madison County, Indiana.

My commission expires May 3, 1905.

REPORT OF INSPECTION OF THE PLANT OF AMERICAN STEEL AND WIRE CO. AND OF THE STREAM KNOWN AS GREENS BRANCH, BOTH AT ANDERSON.

Upon July 20, upon request of the management of the American Steel and Wire Co., at Anderson, I made a sanitary inspection of said company's plant and Greens Branch, a small stream, which flows through the western edge of the city. The refuse which is discharged into Greens Branch from this plant, The American Steel and Wire Co., is known as "spent pickle." The refuse consists of a strong solution of copperas, slightly acid, with sulphuric acid. There is nothing in this refuse which can putrefy or ferment, and therefore it can not produce unsanitary conditions; on the contrary, a strong solution of copperas is a valuable disinfectant and antiseptic and is a great aid in producing good sanitary conditions. Greens Branch is a very small stream of water with ordinary earth banks, which flows through the western part of Anderson. This stream is really an open sewer, for it carries large amounts of sewage and surface drainage. In many places outhouses have been built out over the stream and it is thus badly polluted. Greens Branch contains no fish. It is my opinion that the addition of "spent pickle" from the American Steel and Wire Co.'s plant is beneficial and may be properly considered of sanitary measure. I think this is true because it seems reasonable to assume that it would be desirable to add to an open sewer like Greens Branch, an abundance of any good antiseptic chemical.

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I therefore recommend that a permit be issued to the American Steel and Wire Co. at Anderson to discharge its "spent pickle" without reserve into Greens Branch.

Upon due consideration of this report a permit was allowed as follows:

Whereas, The American Steel and Wire Co., a corporation owning and operating a manufacturing plant in Anderson, Madison County, Indiana, has heretofore filed with the Secretary of the State Board of Health of Indiana, its verified application in writing, asking permit to discharge into a stream in said State known as Greens Branch, a certain waste liquid composed of copperas in solution, and which is technically called "spent pickle," and also knowing that said stream is really an open sewer, contains no fish, and is not in a single instance used as a domestic water supply, and,

Whereas, Said State Board of Health has duly inspected said stream above, at and below the point where said "spent pickle" enters Greens Branch, and finds that said "spent pickle" does not and can not cause unsanitary conditions, but on the contrary, is antiseptic and disinfectant, improving the sanitary conditions of Greens Branch; now,

Therefore, Said the State Board of Health hereby grants and issues this, its written permit, hereby granting permission to said American Steel and Wire Co. to flow and discharge "spent pickle" from its works into Greens Branch from the date of this instrument until the said instrument is revoked.

This permit is given this day, August 17, 1901.

VISIT TO PLAINFIELD ON ACCOUNT OF TYPHOID FEVER AT THE REFORM SCHOOL FOR BOYS.

This visit was made July 25. Typhoid fever first appeared at the institution in April, and up to the time of my visit there had been thirty-four cases and six deaths. The Superintendent, Mr. York, was down with a severe attack of dysentery when I was there. He then had been sick for two weeks and was very weak, and dated his attack from a day when he ate some ham and lettuce salad. The cases had occurred in all degrees of intensity. I found that the drinking water was taken from four springs, and

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analysis of samples of water taken therefrom (the same are appended) show these waters to be pure and wholesome. A sample of water from the pond shows pollution. This pond is a clear body of "spring water" about 100 feet wide and 300 feet long, situated between the administration building and the hospital. The pond water is drawn by pipes into the kitchen and into the shower bathroom. In the kitchen this water is used for washing vegetables and dishes and general kitchen cleaning. The pond water is also used for steam-making and sprinkling the roads and grass. Upon further inspection it was discovered that the creek, just east of the grounds, had been drained and the deep water so formed used for bathing. The creek is a small one and as it flows by fertilized fields, barnyards, pig pens and villages it must perforce contain pollution. The water in the dam was stagnant and in places covered with green scum. Its odor was bad and every drop must carry bowel bacteria. A thorough survey of the pond showed its supply to proceed principally from two springs, but a deep well, furnishing sulphurated mineral water, is almost continually pumped into the pond. I found, also, that two 4-inch tile drains from adjoining fields emptied into the pond. The analysis of this pond water discovered intestinal bacteria, and it, therefore, is polluted. It is probable that Superintendent York was infected by germs of dysentery from this pond, as its water was used for washing the lettuce of the salad he ate. The inmates who had typhoid might have been infected in the same way or by drinking the pond water when they were in the shower bath. Several of the convalescents said they frequently threw back their heads and allowed the shower water to enter their mouths. The infection might also, most probably, be acquired from the dam in the creek where the boys were in bathing.

I recommend that the kitchen be immediately disconnected from the pond, and that as soon as possible a new source of supply for bathing be secured, and in the meantime, very positive orders be given against taking the bathing water from the shower into the mouth. The sewage of the Indiana Reform School for Boys is discharged into the creek nearby. This sewage should be used for irrigation purposes. The lay of the land is admirably adapted for this purpose. At the time of my visit the institution fields were almost burnt up by drouth and the crop of vegetables

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almost ruined. It was stated by the Superintendent that it was probable that vegetables would have to be purchased the coming winter for the first time in many years. The drouth destroyed crops and the great loss is much to be deplored, but especially so when the proper disposal of the institution's sewage would have prevented said loss and at the same time preserved the stream from pollution.

I recommend that this Board advise the Governor and the Trustees to dispose of institution sewage by broad irrigation.

ACTION OF THE BOARD.

After due consideration of the recommendation of the Secretary that the State Board of Health favor and recommend to the Governor and Trustees of the Reformatory that the sewage of the institution be disposed of in some sanitary way, the following resolution was passed:

Whereas, It is unsanitary and wasteful to discharge sewage into streams; and

Whereas, The sewage of the State Reform School for Boys, at Plainfield, is now discharged into an adjoining creek; and

Whereas, During the past summer the garden and farm crops were almost destroyed by drouth; therefore, be it

Resolved, That the State Board of Health respectfully recommends that the sewage of the Reform School, now discharged into the creek, be used for the purpose of irrigation, to the end that the streams may be preserved from pollution and the farm land fertilized and preserved from the losses in crops due to drouth.

Carried.

VISIT TO LETTS CORNER, ACCOUNT OF CONDEMNED SCHOOLHOUSE.

This visit was made August 1.

The schoolhouse at Letts Corner, Decatur County, was formally condemned at the last quarterly meeting. The official document of condemnation was passed on the schoolhouse by Dr. J. H. Alexander, Health Officer of the county. In consequence the Township Advisory Board and the Trustee of Sand Creek Township requested the Secretary to meet with them to explain the

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wishes of the State Board of Health. Accordingly I visited Letts Corner August 1. The meeting was successful, for, after full explanation of the unsanitariness of the schoolhouse and how to remedy the same, the Advisory Board and Trustee said they would comply with every part of the order of condemnation.

VISIT TO CATARACT ON ACCOUNT OF UNSANITARY SCHOOLHOUSE.

This visit was made August 3, in company with Dr. N. D. Cox, Health Officer of Owen County. The schoolhouse at Cataract was furnished by the State Board and there was much complaint that the warming and ventilation were insufficient. There was also much grumbling among the patrons of the school, some accusing the State Board of Health of experimenting with the township in the matter of schoolhouses. A meeting of the people had been arranged for, and upon our arrival the schoolhouse was well filled. An examination of the house was first made and it plainly appeared that the specifications had not been followed. For instance, no vestibules for the entrance doors were provided and they are absolutely necessary to secure efficient working of the ventilation system. The hot air chamber was only two-thirds the size ordered and was unplastered, thus permitting the direct transmission of heat through porous bricks. The chimney was not double, as ordered, and, in consequence, there was no evacuation of the foul air. The citizens' meeting was regularly organized upon motion of Trustee J. M. Sipple, by appointing a Chairman and Secretary. A delay occurred at this point until the Secretary could go to the general store and secure five cents' worth of writing paper for record purposes. Upon his return the speech-making commenced, Mr. Sipple making the first speech. He had much to say about an over-taxed people, and plainly accused the State Board of Health with having experimented in the matter of this schoolhouse. He emphatically protested against any district in his township being so used. He also told how the house was cold during the winter and for that reason it was necessary to place the stove out in the room, running it from the air chamber. Permission was given me to speak and I informed the meeting our plans were not experimental, that the arrangement and scheme of warming and ventilation was in use in scores of schoolhouses in Minne-

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sota and Massachusetts, and besides, the plans and specifications given were prepared by an architect of accomplishment and high reputation. I also made plain the points wherein the contractor had failed to follow the plans and specifications, and explained that under such circumstances the experimenting was entirely on the part of the builder, and success as to ventilation and warming could not be expected. Dr. Cox was told afterward, by the man who built the chimney and hot air chambers, that he was aware specifications were not being followed, but the Trustee was responsible, as the Trustee ordered the changes. A citizen at Cataract also told me that to his certain knowledge a special effort was made to defeat the plans and specifications furnished by the State Board. Dr. Cox and I came away convinced that the defective ventilation and heating of the schoolhouse was on account of improper construction and deviation from the original plans and specifications.

VISIT TO AURORA ON ACCOUNT OF SMALLPOX.

This visit was made August 8. The Health Officer of Aurora, Dr. W. C. Henry, a minister and another citizen, had written letters concerning smallpox at Aurora. As usual, the physicians were divided in their opinion as to the diagnosis. Upon arrival at Aurora I called upon the City Health Officer, Dr. Henry, and together with him visited three houses which were under quarantine. At all of these houses the eruptive disease was certainly smallpox. At one place two cases were found and the other two houses had one case each. The diagnosis was thus confirmed and as proper precautions against the spread had already been taken, nothing remained to be done except to impress more forcibly upon the Health Board the necessity of vaccinating the poor free of charge. No promise was given that this would be done. It was also recommended to the Health Board that it should recommend to the school authorities the vaccination of all the school children. I was in Aurora only three hours and returned by the way of Lawrenceburg, calling upon the Health Officer of that city, but did not find him in. There was no smallpox at Lawrenceburg.

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VISIT TO DALEVILLE.

Visit to Daleville on account of conference with farmers in regard to stream pollution. This visit was made August 13. A farmers' meeting to discuss pollution of streams had been called at Daleville by a self-appointed committee. The State Board of Health was invited to be represented. Soon after arrival at Daleville, Dr. Cowing, Health Officer of Delaware County, in which Daleville is situated, appeared and represented the Health Department of his county. A large meeting was held in the high school room of the school building. Dr. Cowing was made chairman. Many speeches were made upon the evils of pollution, and all of the speakers graphically described how they had suffered from strawboard and pulp mill refuse in the streams. The demand was loud and emphatic for relief. Mr. J. Harvey Koontz was the most prominent speaker. The association of farmers formed for the purpose of bringing suit against the factories which discharged their refuse into White River and Buck Creek was represented by Hon. Mark Forkner, an attorney at Newcastle, Ind. Mr. Forkner made a speech in which he forcibly brought forth the suffering of the farmers who lived along the polluted stream and declared that immediate relief must be had, as was due his clients. On behalf of the State Board of Health, I set forth as plainly as possible the fact that the State Board was heartily in favor of preventing stream pollution. The fact that city sewage is the worst pollution known was set forward as a fact not generally recognized. It was also contended that factory refuse should not be permitted in the stream, also farm and barnyard drainage, and also that the stream should not be used for hog wallows. It is known that 80 per cent. of the hog cholera in Indiana occurs along the stream and that this is because the water carries the germs of the disease from one hog wallow to another. Abolish the hog wallows and the streams would not be polluted with hog cholera and there would consequently be no spread of the disease by this means. That disease is widely spread by city sewage can not be controverted. City sewage is poison from the start and may contain all manners of disease germs, which may be carried by the stream vast distances, and eventually find a soil in human beings and cause sickness and possibly death. Factory refuse does not

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carry disease germs, but it is highly objectionable, for it eventually pollutes the streams by clogging them or by furnishing material which will putrefy and decay and thus produce nuisance. The attention of the meeting was called to the fact that the State Board of Health presented a bill to the last Legislature, which, had it passed and become a law, would almost certainly have had the effect of removing all city and town sewage from the streams and causing cities and towns to take care of the same in some sanitary way, preferably that of "broad irrigation."

Attention was also called to the fact that many of the farmers opposed this wise legislation because they did not understand it. Some of them gave violent opposition in speech and in articles to the papers without ever having read the bill, nor understanding it in the least. The fact was plainly presented that if citizens allowed themselves to act without studying their subject, nothing but evil could result. In my presentation of the views of the State Board of Health, I tried to very emphatically set forth the fact that we understood the subject thoroughly and that the members of the Board were reputable, honest and capable citizens, and that if the farmers would accept our theory and not have opinions without investigation, we felt certain the time would come when the evils complained of would be either entirely removed or abated in large part. The temper of the meeting seemed to be to bring suits, secure damages and possibly injunctions. The permits which had been issued by the State Board of Health were thoroughly explained, and copies of the same being at hand, were read. Particular attention was called to the fact that permission had not been given to deposit refuse, but the provisos of the permits specifically said that certain liquors after filtration and purification might be discharged into the streams. The tin plate mill refuse was explained in every detail. The fact that this refuse is simply copperas in solution was presented and the further fact that such substance as copperas could not produce unsanitary conditions. It could, however, by decomposition, furnish large quantities of oxide of iron, giving the stream a very bad appearance, the same as is given the streams which are filled with iron in mud which gives the yellow color. It was not argued from this that it was wise in every instance to dump large quantities of solution

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of copperas into the streams. It was explained that a permit had been given the Anderson Wire and Steel Co. to discharge its copperas into Greens Branch, which runs through the city of Anderson. This permit was given because, upon survey, it was discovered that this creek was really an open sewer and the addition of the copperas would be beneficial, inasmuch as it would prevent fermentation, putrefaction and decay within the corporation lines. When the meeting closed a vote of thanks and confidence was given to the State Board of Health.

VISIT TO WARSAW.

Visit to Warsaw on account of the presence of an eruptive disease, and on account of the new sewer system being built in that city. This visit was made August 17. Upon arrival I called upon the local health officer, and with him visited two cases of eruptive disease which were found not to be smallpox. One was, in my opinion, an eruption upon a person with a tender skin purely on account of filthiness. Some pustular patches were found upon the patient's limbs and body, but there was no history of smallpox, and as a filthy condition was plainly apparent, the conclusion was that the eruption was somewhat of the nature of impetigo. The second place visited was unquestionably nothing more than acne in very severe form.

The city of Warsaw, some two years ago, took primary action in the matter of extensive sewerage. This step was probably stimulated by the fact that the Chautauqua Assembly authorities at Winona Lake, which is but one mile from Warsaw, had, prior to that time, built an extensive sewer system. This fact most probably brought the importance of sewerage to the attention of the Warsaw authorities. The plans which were being followed were those of a very competent engineer, and I have no doubt will produce the very best results the lay of the land and country will permit. The work was being thoroughly done and this sewer system will mark Warsaw as a progressive city, and undoubtedly the public health will eventually be benefited.

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VISIT TO DANVILLE, ACCOUNT OF SMALLPOX.

This visit was made August 21. A telephone message was received from Dr. Hoadley, Health Officer of Hendricks County, to the effect that several cases of smallpox existed in and around Danville, and the usual trouble existed in regard to convincing the people concerning the character of the disease. I accordingly went to Danville, and with Dr. Hoadley visited four families. The first place we inspected was a farm house about two miles from the city. Two families lived in this house and the entire number of members was seven. A baby only three years old was found in a pustular stage of smallpox. The character of the disease was unmistakable and the case was very severe. We tried hard to persuade the members of the family to be vaccinated, telling them that they almost certainly would have the disease. They were ignorant and I might say stupid, for all our arguments and all the facts we could present would not move them. The father of the child, in course of conversation, several times announced that when he had made up his mind nothing could change him, and this is my warrant for saying we had to contend somewhat against stupidity. It may be here remarked that eventually every member of the family was taken down with the disease and all recovered. The other places visited were within the corporation of Danville, and in all, five cases were examined, every one of them being proved to be smallpox. The diagnosis of Dr. Hoadley being thus confirmed, he was strengthened in his work by being positively commanded to continue strict quarantine wherever smallpox was found, or indeed wherever any eruptive disease resembling smallpox was found, and if the same could not be positively named. The city authorities were appealed to to offer free vaccination to the poor, and to urge, by public proclamation, general vaccination. I vaccinated in all twelve persons.

VISIT TO ROME CITY, ACCOUNT OF SANITARY CONDITIONS.

Visit to Rome City, on account of sanitary conditions at that place. This visit was made August 26. Several letters had been received from the County Health Officer of Noble County, and from Mr. M. L. Jones, Secretary of the Cottagers Association at Rome City, requesting a visit by the State Health Officer, in

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order to inspect the sanitary conditions and make recommendations. Inasmuch as some friction had occurred between the County Health Officer and the Cottagers, I thought it best to make my inspection alone, and therefore, upon arrival spent almost one day in inspecting the town and cottages around the lake. It will be remembered that the Noble County Board of Health passed a set of rules one year ago, requiring that all cottages at this summer resort should be supplied with earth closets. This order had been obeyed to some degree and the County Health Officer had arrested two persons for non-compliance with the rules and they had been promptly fined. Many of the cottages were conducted in the most sanitary way, excrete disposal being effected by the earth closet method. Others were in various conditions, ranging from bad to horrible. When my inspection was complete I called on Mr. Jones, the Secretary of the Cottagers Association, heretofore named, and also searched out the Deputy Health Officer at this place. With them I made re-inspection of part of the cottages and then returned to give them instructions. It was unfortunate that Dr. Miller, Health Officer of the county, living at Albion, many miles away, could not be present. It was only possible to recommend the thorough enforcement of the rules of the County Board of Health, for they certainly were right and proper in all save one or two minor points. A promise was elicited from Mr. Jones that the Cottagers Association would do all it could to influence the inhabitants of the cottages to follow the rules. Mr. Shimmerhorn, the President of the Board of Commissioners and also President of the County Board of Health, was met at Rome City and a thorough understanding of the situation was had between us. It was with pleasure, in this connection, I gave an account of the sewer system and sewage disposal inaugurated by the Grand Rapids & Indiana Railroad at Rome City. At present this sewer system and disposal is applied solely to the island in the lake. Upon this island is situated a large auditorium, several pavilions and a hotel. There are possibly as many as 10,000 people visit this resort, and therefore, the amount of sewage at such times is very great. Formerly disposal was effected by disposal in vaults with a production of awful nuisance at every point where vaults were located. One year ago the railroad company em-

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ployed Mr. Pearson, a sanitary engineer at Kalamazoo, to devise a sewer system and sewage disposal method. The sewage is brought from an island in an 8-inch iron pipe, which is suspended upon the bridge and continued through the town of Rome City until it appears upon low lands. At the terminus of the sewer is provided two large cisterns which have constructed in them self-acting syphons. These syphons conduct the sewage into two sewage beds. These sewage beds are constructed after the well-known method which has been approved by the Massachusetts State Board of Health. They lie side by side and comprise one-half acre each. The cisterns, with their self-acting syphons, are emptied periodically and alternately upon the sewer beds. Very satisfactory purification of the sewage results and the effluent from beneath is allowed to flow into the adjoining creek. These are the first sewer beds established in Indiana and the credit belongs to the Grand Rapids & Indiana Railroad. That this corporation should have preceded all of the municipal corporations is to be noted and the reports of this Board should fully set forth this great improvement.

VISIT TO OLDENBURG.

Visit to Oldenburg, on account of typhoid fever in the Convent of Franciscan Sisters. This visit was made September 3. The Convent at Oldenburg is the home of almost 550 sisters. Typhoid fever broke out in this institution July 26, and from that date to the time of my visit, thirty cases had appeared, with two deaths. The assistance of the State Board of Health was invoked by Dr. Jos. Ziteke, the physician of the Convent. In his letter he recited the condition existing at the Convent, and although he felt sure the water was the source of the disease, he thought that an inspection by the State Board of Health would result in much good, and strongly urged that the same be made. Upon arrival at Batesville, I called upon Dr. Ziteke, and with him drove to Oldenburg, three miles distant. The Mother Superior received us most cordially, and a thorough inspection of the premises was made, after first visiting most of the cases which existed. The disease was, without question, typhoid. From the fact that out of the thirty cases at Oldenburg, nineteen had not been away from the

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institution for one year and over, I concluded that typhoid infection was certainly present at the place. The building is a new one, constructed of stone and brick, with tile floors in all the corridors, and with hard wooden floors in all the rooms. The institution is surrounded by a high stone-capped brick wall, and the area so enclosed comprises about three acres. Prior to about one year ago, most of the sewage was disposed of in sinks and vaults within the walls. At the time mentioned many improvements were made at the convent and a large sewer constructed, which had, from the time of its initiation, carried the sewage to a distance of one mile, discharging it into a creek. The institution itself is immaculately clean and is always kept so, and is also well ventilated in every particular. In the matter of ventilation, Dr. Ziteke had given strict instructions and the same were followed to the letter. Upon investigation, I found the drinking water supply was from four dug wells. Cisterns with steam pump and reservoir in top of the building supplied the institution with bathing and washing water. Samples of water from the four wells were brought away for analyses. Three of the samples were found to contain the colon bacillus, but the fourth gave no evidence of its presence. The chemical analysis proved the presence of pollution. As the food of the institution is cooked with the skill and intelligence which is always known to be possessed by the Catholic sisterhood, it could not be supposed that the infection of typhoid had been communicated through the food, unless, perhaps, such result had attended through the ingestion of raw vegetables, such as lettuce and radishes. It was discovered that such vegetables were washed with the cistern water and not with the well water. The cistern supply was very low on account of the continued drought, and samples from the same were not taken. As the cistern was not used in any instance for drinking, there seemed no reason of analysis of the scant supply found remaining in the same. My analyses are herewith appended. The Sister Superior, through Dr. Ziteke, was recommended to immediately purchase a still of sufficient capacity to furnish the inhabitants of the convent with distilled water for drinking purposes, and, as it had been demonstrated that cisterns could not be depended upon for a supply of washing water, it was further recommended that an engineer be employed and

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install a purification plant whereby the well water could be softened and made pure.

We have a letter on file from Dr. Ziteke informing us that our recommendations have been adopted and will be completely followed out.

LOVETT.

Visit to Lovett, on account of dedication of the sanitary schoolhouse at Lovett, which was recommended by this Board. This visit was made September 24. One year ago Prof. M. W. Deputy, County Superintendent of Schools of Jennings County, appealed to the State Board of Health for plans and instructions in regard to a new schoolhouse which was to be built. The Secretary had promised Prof. Deputy that, upon the occasion of the dedication, he would be glad to attend and represent the State Board of Health, and, if necessary, make an address explaining the relations of the Board of Health to the people and the advantages to be derived from sanitary schoolhouses. There was a large attendance at the dedication, probably not less than 350 people composing the congregation. The dedicatory services were held in a grove adjoining the schoolhouse, and the feature of the occasion was the graduation of the class which passed the examination the spring before. A speech was made by Prof. Deputy, conferring diplomas upon the graduates and telling the part he had taken in the construction of the "sanitary schoolhouse." This schoolhouse is built of brick, two rooms, being lighted through corrugated glass from one side only, and the ventilation is such as to change the air in the rooms four times each hour. The warming capacity of the furnace was warranted by the builders to be sufficient to obtain a temperature of 70° in the room during zero weather without. There are three cloakrooms in the building, each one having a register, and, therefore, will be warm, and each is also thoroughly lighted and ventilated. The water supply is from a new driven well, placed in the front yard, and the same is supplied with ample underground drainage to carry away the waste water. The outhouses are of brick and widely separated, provided with screens and good paths leading thereto. This schoolhouse at Lovett marks a decided advance for that locality, and unquestionably great good will result therefrom. In my address the endeavor was made to

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present to the people the fact that the State Board of Health is endeavoring to advance the interests of the State through the preservation of the public health and the prevention of disease. How this was to be done was explained briefly, describing the schoolhouse and entering rather extensively into the details of why certain features prevail within the same. Altogether the dedication was a grand success, and I am confident the part the State Board of Health has played therein is eminently to its credit.

JEFFERSONVILLE, ACCOUNT OF TYPHOID FEVER.

Visit to Jeffersonville, on account of typhoid fever and tuberculosis at the Jeffersonville Reformatory. This visit was made September 25. Typhoid fever broke out at this institution last January, and since that date there has been sixteen cases. The food of the inmates is all sterilized by thorough cooking, and it was, therefore, possible to secure the infection only through the drinking water. These considerations were enough to prove that the water was infected; but two samples were analyzed, and the results of the same are appended. In both samples intestinal bacteria were found, and the chemical analyses proved the presence of polluting matter. One sample was taken from a well without the prison walls, which was a contemplated source of supply. The other sample was taken from the well within the prison walls and which has been the source of supply for many years. The prison also purchases water from the Jeffersonville waterworks for the flushing of closets in the cells, and the same is used in the cells in the wash bowls and is sometimes drunk at night by the inmates. The supply is from the Ohio River, and, as it is notorious that this stream is highly polluted, it is very likely that this is another source of typhoid. It seems proven that the well contains typhoid infection, for it certainly contains intestinal bacteria. It will be noticed from the analyses that the water is very heavily laden with mineral matter. Thirty parts per 100,000 of mineral matter is all that is allowed by sanitary authority for good drinking water, and this sample contains 85.5 parts. It is well known that water so heavily laden with mineral matter will invariably, in a large percentage of those who drink it, produce various gastric disorders. Inquiry shows that this class of complaints has been omnipresent

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at this institution. That the same may be attributed, in large part, to the water is very certain. I gave it in my opinion in writing to Supt. A. T. Hert and Surgeon H. C. Sharp that it would be futile to try to secure a proper supply of water from wells either within or without the walls, but it would be most practicable to use the present abundant supply and erect a purification plant. This plant should be of such character as to soften and purify the water at the same time. The softening is necessary in order to reduce the great quantity of mineral matter which is undoubtedly injurious. The new cell-house, which has within it 500 cells, is supplied, as has already been stated, from the waterworks of Jeffersonville. If the purification plant recommended from this office is installed, it will be desirable that a standpipe be erected of sufficient height to discharge its water into the fifth tier of cells. The elevated tanks now in use are not sufficiently high to do this. I confidently predict if the water of this prison is purified that typhoid and diarrhœal disease will be almost completely banished and the improvement of the general health of the prisoners will result. It is a pleasure to note the completion of the new cell-house and the further fact that the renovation and thorough ventilation of the two old cell-houses will soon be finished. At the present time the new cell-house is overcrowded, this being necessitated by the fact that the renovation of the other cell-houses makes it necessary to care for the prisoners elsewhere. Tuberculosis has prevailed at this prison many years, and during the construction of the new cell-house, now in use, the prisoners, as stated in a former report, were compelled to live under such circumstances of ill ventilation as to be productive of tuberculosis. This condition still prevails, for as just related, the new cell-house is overcrowded, and, as there are no available funds from which to pay expenses of running the ventilating machinery, the prisoners are denied a proper amount of air. Such conditions will, of course, continue to produce tuberculosis, and this is a sad comment upon the practical management of the State. It must be distinctly understood that the Superintendent and Prison Board understand the situation thoroughly, and do all that possibly can be done with the means at their disposal. It is feared that the new cell-house will become infected with tuberculosis on account of the crowding and presence of the

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prisoner affected with the disease. This will necessitate thorough cleaning and disinfecting so soon as it is possible to use the old cell-house now in process of being remodeled. At the present time there are about 100 cases of tuberculosis. The surgeon could not tell the exact number, because he was well aware there were many prisoners afflicted with the disease who had not been examined, and it also was fair to presume that in such an institution there are cases unknown. We rejoice with the prison authorities that very soon the evil conditions producing typhoid fever and gastric disturbances will also be removed.

SANITARY ANALYSES OF SAMPLE OF WATER FROM INDIANA REFORMATORY.

County.	*City or Town.*	*Name of Collector.*	*Date of Collection.*
Clark.	Jeffersonville.	Mr. A. T. Hert.	September 7.
Clark.	Jeffersonville.	Mr. A. T. Hert.	September 7.

Date of Analysis.	*Well, River, Creek, Pond, Spring.*	*Turbidity.*	*Sediment.*
September 9.	Well pump.	Slight.	Abundant.
September 9.	Well pump.	None.	None.

SOLIDS.

Color.	*Odor.*	*Total.*	*Fixed.*
Yellow.	None.	41.1	33.7
None.	None.	85.5	64.0

Chlorine.	*Free Ammonia.*	*Albuminoid Ammonia.*	*Nitrites.*
2.1	0.00	None.	0.001
7.6	0.003	None.	None.

Nitrates.	*Intestinal Bacteria.*
0.400	Present.
1.000	Present.

UNION CITY.

Visit to Union City, on account of smallpox. This visit was made September 30. On September 10 a letter was received from Dr. Wm. Commons, Health Officer at Union City, giving notification of the existence of smallpox in Union City, Ind. The same letter told that the disease prevailed more or less in the Ohio part of the town, for, as is well known, this municipality is partly in Ohio and partly in Indiana. The Ohio side did not come under the control of Dr. Commons, and he therefore had no authority.

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The two cases which existed on the Indiana side were promptly recognized and promptly quarantined, and vaccination was recommended. Again on September 25 a letter was received from Dr. Commons stating that smallpox prevailed unusually on the Ohio side, and the Indiana side was in danger of being infected. Accordingly, I wrote to Dr. Chas. O. Probst, Secretary of the Ohio State Board of Health, informing him fully in regard to the situation, and asking that he fix a date and meet me at Union City. It was arranged that we both be there on September 30, and see what could be done. When the time arrived, together with Dr. Probst, I visited five families on the Ohio side, and, in every instance, smallpox was discovered. It was also discovered that the disease had been prevailing in Union City, on the Ohio side, for probably two months, being mistaken by certain doctors to be chickenpox. The old and foolish notion concerning Cuban itch, Porto Rico scratches, etc., had found entrance among the medical fraternity at Union City. In this connection I can not refrain from expressing regret that this nomenclature for smallpox, which originated with the ignorant negroes of the South, should be adopted by any Ohio or Indiana physicians.

Dr. Probst called the authorities of Union City, Ohio, together, and plainly told them their duties in the premises, and explained the penalties if they did not act. The promise was freely given by the Mayor and the local Board of Health that everything would be done exactly as he ordered to stop the plague. The precautions taken by Dr. Commons on the Indiana side undoubtedly produced good results, for close inquiry among the physicians, also among the people, discovered but one case of eruptive disease, and that proved to be a plain case of chickenpox in a child which had never had the disease. The differentiation was perfect, and there can be no doubt that the case was chickenpox. It is to be greatly hoped that the infection will not find its way across the line into the Indiana part of the city, although this can hardly be expected.

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IN THE MATTER OF THE DISPOSAL OF THE SEWERAGE AT THE EASTERN HOSPITAL FOR THE INSANE AT RICHMOND.

Trustees Eastern Hospital for the Insane, Richmond, Ind.:

Gentlemen—In obedience to the commands of the State Board of Health, I have the honor to transmit to you a copy of the letter received from the Richmond Country Club, and also a copy of the resolution passed by the State Board of Health.

Letter From Richmond Country Club.

State Board of Health:

Gentlemen—We beg to advise your honorable body that we have leased the John P. Smith farm, immediately west of this city, to be used as a Country Club. A small stream, Clear Creek, runs through this farm, and carries the sewage from the Eastern Indiana Hospital for the Insane. The sewage accumulates in various places, stagnates and becomes exceedingly offensive and unhealthful, especially in hot weather.

The membership of the club is over 200, and we feel that we should have some relief from this condition, and respectfully petition your honorable body for relief.

Very respectfully,
THE RICHMOND COUNTRY CLUB,
By Board of Directors.

Whereas, Upon complaint, the Secretary of the State Board of Health. the Secretary of the Wayne County Board of Health, and the City Health Officer of Richmond, Ind., visited the Eastern Indiana Hospital for the Insane at Richmond, and found the sewage from said asylum flowing into a small stream known as Clear Creek; and,

Whereas, It was the unanimous conclusion that the inflow of said sewage from said asylum constituted a nuisance, rendering said stream offensive and unsanitary; and,

Whereas, This day, May 28, 1901, a further complaint has been presented to this Board from the Country Club of Richmond, Ind., declaring the stream foul and offensive and demanding relief; therefore, be it

Resolved, That the State Board of Health of Indiana declare the said Clear Creek in an unsanitary condition and a nuisance, in consequence of the sewage flowing into said creek from the Eastern Indiana Hospital buildings; and be it further

Resolved, That the Secretary of the State Board of Health is hereby ordered to serve notice on the Trustees of said hospital to abate the nuisance by making other sanitary disposition of the sewage as soon as practicable.

Please take notice of this official information concerning the condemnation by the State Board of Health of the present method of sewage disposal at the Eastern Hospital for the Insane.

Respectfully,
Secretary State Board of Health.

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Richmond, July 25, 1901.

J. N. Hurty, Secretary State Board of Health, Indianapolis, Ind.:

Dear Doctor—I beg to respectfully acknowledge the receipt of your communication of July 24, containing a copy of a complaint filed against the Hospital by the Richmond Country Club, and of a resolution adopted by your Board condemning the present method of sewage disposal in this hospital. Your communication will be submitted to and considered by the Board of Trustees at its next regular meeting.

S. E. SMITH,
Medical Superintendent.

PETITIONS FROM ANDERSON.

The following petitions and answers explain themselves:

To the Honorable State Board of Health:

We, the undersigned, citizens of Anderson Township, Madison County, Indiana, respectfully petition your Honorable Board and represent and say that the Union Traction Company of Indiana, with headquarters at Anderson, Ind., is discharging the refuse from its powerhouse in North Anderson, Ind., into Kill Buck Creek, a running stream; that said refuse runs into a mill-race and gathers and dams up near a public highway; that the same produces a horrible stench, is very offensive to the citizens in the neighborhood and to passersby; that the same pollutes said stream and is a nuisance and dangerous to public health; and that said condition has existed for some time, now exists, and will continue to exist and be a nuisance and dangerous to health unless the same is abated by the action of your Board.

Wherefore, We respectfully ask that you take the necessary steps to abate said condition and protect us against a continuance of the same.

Respectfully submitted,
Signed by Ninety-nine Citizens.

State of Indiana, Madison County, ss:

Peter Goehring, being duly sworn, upon his oath, says the allegations in the foregoing petition are true as he verily believes.

PETER GOEHRING.

Subscribed and sworn to before me this September 17, 1901.

W. S. ELLIS,
Notary Public.

October 2, 1901.

Mr. Peter Goehring, Anderson, Ind.:

Dear Sir—Your petition to the State Board of Health, which was sent to the Governor, with a letter dated September 19, has just been referred to this office. Had you sent your petition direct to the State Board of Health, the same would have been answered long ago.

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The local Board of Health, which is composed of the City Council and Mayor of your city, has full and absolute powers in the matters of which you complain. Your County Board of Health, which is composed of the County Commissioners, also has full and absolute powers in the matter. You should apply to your County and City Health Officers, who are respectively Dr. S. C. Newlin and Dr. W. J. Fairfield, and to them make your complaint.

It will then be their duty to inspect the conditions which you say constitute a nuisance and report the matter, in writing, to their respective Boards with recommendations. The persons signing the petition presented to us should be present at the time the reports of the local Health Officers are presented and use their influence with the members of the respective Boards for abatement. If your local Boards will not act, any one of the petitioners or all of them are privileged to bring suit in your county court for abatement of the nuisance of which you complain. You will plainly see from the above that you have this matter in your own hands, and if you wish, you can cause your local Boards of Health to take action or you can proceed directly in the courts yourself.

Hoping that right will prevail, I am, very respectfully,

SECRETARY.

Anderson, Ind., September 27, 1901.

State Board of Health, Indianapolis, Ind.:

Gentlemen—The undersigned officers and directors of the Anderson Commercial Club, have been informed that a petition has been filed with your Honorable Board, asking you to take action to abate the alleged fouling of Kill Buck Creek, near Anderson, by oil, iron, rust and refuse from the powerhouse and shops of the Union Traction Company, located immediately north of this city.

We respectfully submit that the creeks and rivers of this State are the natural drains afforded by nature and that all the citizens have a right to a reasonable use of the same for the purposes of drainage. The Union Traction Company, by the construction of its system of interurban and street electric railways, has largely advanced the prosperity of the city of Anderson and other towns and cities, as well as the country through which it passes. It has expended large sums of money in the construction of its railways, powerhouse and shops, etc., and gives steady employment to about 400 men. It has also furnished a cheap, rapid and convenient mode of transportation between the cities connected by its lines. In the construction of its powerhouse and shops adjacent to the city of Anderson, and located upon the banks of Kill Buck Creek, it has expended large sums of money, relying upon its right to use the said creek as a natural drain from its said powerhouse and shops. We respectfully submit that the refuse, oil and iron rust cast into said Kill Buck Creek are not prejudicial to the public health, and at most are only a slight annoyance to the petitioners and some others along and about said creek; that it is necessary in the rapid development of the State of Indiana, and especially of that part of the same known as the Gas Belt, that personal considerations and the convenience of individuals should

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give place to the public good, and that the object should be to secure the greatest good to the greatest number of our people. For your Honorable Board to make such order as would prevent the Union Traction Company from using said Kill Buck Creek and the waters of the same by casting into said creek the refuse from their powerhouse and shops, would be to work a great hardship upon and damage to the said Company, entirely out of proportion to the inconvenience and annoyance that might be sustained by the petitioners.

We, therefore, ask your Honorable Board to deny the prayer of the said petitioners.

Signed by Eight Citizens.

October 8, 1901.

Mr. John P. Sears, Secretary, Anderson, Ind.:

Dear Sir—I thank you for your letter and for the clipping which you have sent me. I believe the proper procedure is to save our industries from suits and also save the streams from pollution. It is perfectly practicable to accomplish both these ends. It has been done in many European countries and notably in Massachusetts, and it can be done in Indiana. That we need the factories and that they should be fostered in every possible way, goes without saying; and that we need the streams to carry refreshment and health throughout the land and for beauty, also, will go without saying. The plan of procedure for the preservation of the industries and the streams is to require that all industries must dispose of their refuse in a sanitary way. For instance, the tin plate mills discharge into the streams a solution of copperas. Let them be compelled to save this copperas and crystalize it. This will involve a small plant for the purpose, but all will admit the tin plate mills are amply able to build such a plant and to crystallize the copperas from their "spent pickle" instead of discharging it into the streams. Even if there is no profit attached to recovering this copperas, that would not matter, for its recovery would be a benefit to the people. It follows, that what benefits the people will, of course, benefit the factory. As for strawboard mills, we must preserve them, by all means, if possible. Let us then search out some way of disposing of the strawboard refuse in a sanitary manner. Such way can unquestionably be discovered by sanitary engineers and chemists. In Austria and Prussia the refuse from paper mills is disposed of by precipitation with lime and earth in large vats and the clear liquor is allowed to run into the streams. The precipitated refuse is used upon land. The sale of this refuse is not of sufficient value to pay the entire expense of purification, but the paper companies are required by law to purify, nevertheless, for their own as well as for the country's benefit. They have found recently, in Germany, a use for strawboard refuse after it has been separated from the great quantity of water which carries it. This use is to mix it with plaster instead of using hair, and to use it in cement where the same is put down for pavements. It may also be used in asphalt for thickening the same. There are several squares of cement sidewalk in Berlin which contain large quantities of strawboard refuse. As for the purification of sewage before it is allowed to enter the stream, that is a problem which has been solved for

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over thirty years. The great city of Berlin, with its 2,000,000 inhabitants, uses all its sewage for the purpose of irrigating a farm which is 20,000 acres in extent. The sewage makes not the slightest nuisance and the farm is made to bud and blossom like the rose through droughts and all kinds of weather. Barren land, not heretofore useful for agricultural purposes, has been rendered fertile and productive. At Brockton, Mass., sewage is disposed of by "broad irrigation" upon farm lands. The products from the farm are choice and sell for extra prices in the Boston and New York markets. In addition to securing extra price, the productiveness of the land is increased three-fold. In other words, it would be a course of profit for Anderson to use its sewage upon land for the purpose of irrigating and enriching the same. It would take considerable capital to install the system, and the sewage irrigation would have to be conducted scientifically and not by politicians. If so conducted, the sewage could be depended upon in time to pay the entire debt and finally yield a revenue. In view of these facts, I am sure that you will agree with me that it would be best for the State to take the proper steps to accomplish the purification of the refuse from the industries. If I could see you and talk with you, it would be possible to give statistics and figures and examples where all of this has been done, and if it will be agreeable, I will be glad to call and see you next Saturday.

You are probably aware that the State Board of Health, under the law passed by the last Legislature, has granted permits to various industries to use the streams to a certain extent for liquids which they wish to dispose of. The farmers of Delaware County are up in arms against this, and I have lying before me a letter which came in the same mail with your own, from one J. Harvey Koontz, of Yorktown. He is very violent in his expressions against the industry and demands the revocation of all permits issued by the State Board of Health. Mr. Koontz has been answered and told that the State Board of Health will meet Friday, October 11, at 3:30 p. m., and he can make his plea before the Board at that time if he desires. It may be that you, as Secretary of the Anderson Commercial Club, would like also to appear before the Board to make any argument you may have in mind.

Hoping to hear from you further and hoping that we may all get together to do those things which will advance the best interests of the State, I am, very truly yours,

SECRETARY.

Upon due consideration of the matter of discharging of polluting matter into Kill Buck Creek, the following action was taken:

Resolved, That as the corporation named in the petition from Anderson is discharging its refuse into said stream without a permit from the State Board of Health, that if a nuisance is the result of said discharge, the matter is one for prosecution by parties injured, and in nowise demands action by the State Board of Health.

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REPORT OF INSPECTION OF SCHOOLHOUSE AT CLAY CITY, TUESDAY, AUGUST 6, 1901.

(By Dr. Wishard.)

On Tuesday, August 6, I visited Clay City, Ind., and made an examination of the school building at that place, and took the testimony of various persons interested in the matter.

I find there are two school buildings, one of brick and one a frame. The brick building is two stories in height, and there are three rooms on each floor. The south end of the building, on each floor, contains two rooms. These rooms are 30 feet in length and 24 feet 6 inches in breadth. The ceilings are 11 feet 6 inches in height. In one of these rooms there is but one door for entrance or exit. In the other there are two doors.

The north end of the building has one room, which is 29 feet 8 inches in length, 23 feet 6 inches in breadth. This room has but one door. The windows are small and give wholly inadequate light. The heating is by stoves. The floors are very weak. I stood in the center of the floor in each room, and by a little motion of my body was able to shake the floor so that it vibrated throughout the room. The walls of the building are 12 inches thick and the foundation is of white sandstone. The walls are cracked on the south end. The brick used in the construction of the walls was originally a poor quality, and much of it is now quite soft and crumbling in places. The building has a metal roof, and stands on a foundation about twelve inches above the ground. Its location is on elevated ground, but there is only surface draining.

There are two outbuildings, which are wholly inadequate, have no drainage and are located too near the building. I made photographs of the building, which I present as a part of my report.

The inspection of the building was made in company with Mr. E. F. Cox, a civil and mechanical engineer, of Worthington, Ind., who was employed to be present on behalf of the School Board. After making the examination of the building above referred to, I went to the Kline House, the leading hotel of the town, and notified all parties interested that I was ready to hear their statements, which were not sworn to, but in each instance read to the parties making them and approved by them.

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P. T. Jett, Druggist: If the building is dangerous, he is in favor of a new building, if one can be built. If the old one can be repaired and used, he prefers it should be done. Thinks building can be repaired, but flues especially need repairing. Has had a daughter in school three years who has not been sick during that time.

Dr. M. A. Freed: Has practiced in Clay City since 1882. Says heating of building is poor, being only by stoves and ventilation by windows, and consequently some parts are overheated while others are cold. His own children have suffered from colds, caused by above condition of the building. Not in favor of spending much money on old house. He thinks a new building should be constructed with proper heating and ventilation. School children are entitled to a modern school building with proper heating and ventilation.

Dr. C. H. Wolfe: Has practiced here for twenty-five years. Membership on School Board terminated two years ago, after serving three years. Has no children. Is in favor of new building if it can be built on legal assessment. If not, then he is in favor of repairing old. While he was a member of the School Board, he observed that the building was like any other building heated by stoves, some parts being hot and some parts cold. During a few days one winter, while he was a member of School Board, school had to be closed on account of extreme cold. He thinks light and ventilation of building is inadequate.

Mr. B. M. Guirl, Manufacturer: He has examined the building recently. Finds floors and ceiling sagged down in places. Likewise the roof. The building has metal roof. The walls and windows shake and vibrate when one walks heavily through center of floor. Has four children in school. His children, he thinks, lost half the school term by illness, which he and his wife think wholly due to school building's unsanitary condition. He is in favor of a new building and opposed to spending any more on old building. Thinks it is economy to citizens and justice to school children to have new school building.

Mr. J. A. Goshorn, Banker: Formerly school teacher in this city. He lives near the school building and sees it daily, but has not examined building for four or five years, although he has been

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in it in that time. He has two children who attend this school. He taught in the building four years, his first term ending eight years ago. Heating at that time was as good as could be done by stoves. He considers stoves a proper method of heating school buildings. He thinks steam is better. He thinks flues are in very bad condition. Thinks the sanitary condition of the school building is good, although he has not examined the building in five years.

Mr. Joseph McGeiser, Saloonkeeper: Has lived here since 1882. Has five children, and three go to school. Heard reports of unsafe school building last spring and went with another gentleman to the schoolhouse and examined it carefully. He found no evidence of danger in the building. Building was erected in 1882 or 1883. Has had no sickness in his family as result of condition of building. He is not in favor of building a new schoolhouse if old one can be fixed, because there is not enough money.

Mr. J. W. Danhone, Druggist: He has lived here twenty-one years. Has no children in school. Does not know very much about school building. He has not been in building for five years. He was on the School Board six years ago. If building is not safe, wants a new one if it does not cost too much money. If old one can be repaired thinks it should be done.

Mr. B. E. Conley, Contractor: He has lived here twenty years. Built the old part (south end) of present building in 1882. North end was added about ten years ago. He has examined building recently and thinks house is safe—that is, it will not fall down. House has been poorly cared for and needs cleaning. He thinks building is safe and could be used with some repairs.

Mr. E. F. Cox, Civil and Mechanical Engineer: He has been an engineer twenty-five years. He had experience in the construction of school buildings and has given attention to the sanitary question involved, such as heating, lighting, ventilation, etc. He has recently examined the school building in Clay City. At the request of Dr. Bronlette and Dr. Asbury, two members of school board, he made an examination of building about two weeks ago, with reference to the question as to the safety of the building for use as a school building, but not with reference to its sanitary condition. The examination was made to determine whether build-

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ing could be made safe. Found that the fault was largely in the joists. The first floor joists are now carrying a dead load (the weight of themselves, weight of flooring and also deadening, which is of clay, etc.), of about 60 per cent. of their carrying capacity. This is also true of the second floor. It causes the floors to sag in the center. The ceiling joists of second floor carry one-fourth the load of the roof, which should be carried in the wall by trusses. The brick in the walls, are, many of them, bad, being soft, but not enough to cause the building to be particularly unsafe so far as being able to carry the weight required. The roofs were intended to be tied together with "hog chains" or rods which have never been put in place. The flooring, in part, needs replacing. He thinks roof is not in good condition, but can be made all right. He found in examining building that it could be made safe so far as danger in falling down or danger to life is concerned, by placing a wall under center of lower floor at right angles with joists and placing a steel-eye beam under center of second floor joists, with cast-iron column supporting center of same. The roof should have truss braces over ceiling joists to support the roof. The "tie" rods now in use should be fastened to walls. There are half-inch joists now running parallel with second floor joists that should be replaced by three-quarter rods extending entirely through the building. He thinks the lighting is fairly good. The ventilation is poor, but as good as could be made with common stoves. No recommendation was asked for by the Board in reference to the sanitary condition of the building. He does not think the building could be made a modern school building. Thinks the building could be fairly well ventilated by ventilating stoves. Ventilating stoves would heat adequately. Nothing could be done to remedy the lighting of the building. Thinks about $1,000 would make building last several years. He thinks it would be a thorough sanitary building in reference to everything except light, which can not be remedied.

John Gardner, Attorney: Has lived here fifteen years. Has five children who have been or are in school. None of them have ever been sick as a result of attending school. He thinks forming children in line out of doors, waiting to march in when weather is bad, has had much to do with bad health.

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Dr. J. A. Modesitt, City Health Officer: He has resided here eight years. He has made a sanitary survey of the building in question (in April last) and found it wholly unfit for use as a school building, as to heating, lighting, ventilation and drainage. There is nothing but surface drainage for the grounds and there is no drainage at all for the water closets about 60 feet from the building. From observation of his own children and his patrons' children, he has noticed the effect of attending this school is to produce many colds. He has known children who contracted colds and had to remain out of school a few days. Colds were contracted as a result of poor heating and ventilation. Thinks that a new building is badly needed. Thinks building could not be repaired so as to meet modern sanitary requirements.

Dr. S. C. Bronillette, Member of School Board: Resided here seventeen years. There are 500 children enrolled and 400 attend school. With the exception of the primary building, he has not regarded the rest of the building as overcrowded. There has been some complaint in this regard. The teacher, last winter, had half the children attend in forenoon and half in the afternoon, because overcrowded.

There are 373 seats in the brick building and in the frame there are 90 seats. This includes counting double seats to seat two. Total seating capacity, 463. School enumeration, 441, in 1901. The average seating capacity in each room in brick building is 62. Seating capacity of frame building is 90.

On page 203 of the minute book of the State Board of Health will be found some additional facts with reference to this matter, which I have considered in connection with the investigation I made myself on August 6, 1901.

As a result of my investigation, I respectfully recommend that the order of condemnation, heretofore passed by your honorable Board, be not rescinded. My reasons for making this recommendation are that I do not believe it possible to convert the present building into a thoroughly sanitary one. It is old and dilapidated, and the only use it can be put to is to take such of the old brick as are not too soft and use them in the construction of a new building. The frame building referred to in the first part of this report, and used as a primary department, is utterly unfit for use as a school

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building. I appreciate the seriousness of the situation and recognize that the constitutional limit of taxation will not raise a fund sufficient to erect a new building at this time. This is a question, however, with which the State Board of Health can not deal, and is one that rests with the people of Clay City, and it is a question which would be equally operative if the building should take fire and burn down.

To the Board of Trustees of the School Town of Clay City, Clay County:

Gentlemen—In compliance with your request, I have this 11th day of May, 1901, made an examination of the school building in your town, and beg leave to herewith submit the following in reference thereto:

I find that the four flues of the old school building are in each corner, and that the corner walls of the same are only four and eight inches in width, which leaves no corner, and which, in my judgment, is very improperly constructed and also very unsafe.

I find the partition walls between the four school rooms of the old building are cracked, and pulled apart from the main walls at either end, so much so that a rule can be run clear through from one side to the other, or a distance of 18 inches. I think this condition of affairs exists from the foundation to the top of this partition wall at both ends. I also find this partition wall bulged out to the west. The cause of this will be stated later on in this report. I find the west wall of the old part of the school building bulging inwardly at the center, or second floor line, and at the bottom or below the windows it bulges to the outside.

I find the joists in all the floors in both the old and new part have sank down 2½ to 4 inches. I find cracks in the tower at different points from top to bottom. I also find that the tower or entrance is leaning to the south, and a strong wind would have a very serious, if not fatal, effect upon it. In the attic I find a deplorable system of architecture. The main purlin of the roof is supported by wooden posts running east and west, and I find but two of these posts supporting this roof resting upon the cross wall. The others rest upon a single joist. I find the joist in the attic sunk down at least 3 inches, if not more, which is caused by the weight of the roof and of the joist.

Now, the cause of the cross wall bulging as it does is because of the fact that the main weight of the roof of the old building rests solely upon that cross wall, which makes it entirely too heavy; consequently the wall will not and can not support it. If this cross wall should happen to fall down, the weight of the roof would crown out and throw down the outside walls, and this cross wall is, in my judgment, liable to fall at any time; especially is this true during a wind storm, or a heavy snow.

The new part of the building is not in as bad condition as the older, but it is not safe, in my judgment, because of the improper construction of the roof plan. These are no purlins and no supports, save the support composed of 1x6-inch fencing board nailed to the rafter and to the joists. There is nothing to support the roof, except a few nails that are in these stays that run from rafter to joist.

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There is no ventilation whatever, and none could be installed that would in the least degree purify the atmosphere of the school room.

From the above statement, my conclusion is that the school building is totally unsafe for habitation by pupils, and that it can not be repaired so as to make it safe and insure proper ventilation and proper heating, which should and ought to be a paramount question with all School Boards. Respectfully submitted,

AMBROSE MOORE.

Terre Haute, Ind., May 25, 1901.

Mr. J. H. Travis, Secretary School Board, Clay City, Ind.:

Dear Sir—I made a careful examination of the school building and found several things about the building on my second visit that were not talked of on my first visit. Below you will find an estimate of cost to put the old building in anything like repair.

The State Board of Health would require you to take off all the old paper and a greater part of the wainscoting and all the wood ceilings as they would not consider them sanitary. As a business proposition I do not think it would pay to repair the old building. The material in it is worth about $700 and could be disposed of for that. Take $3,507 and $700 makes $4,207 that the old building would stand you, and then you would have an old building that would last not to exceed ten years.

I think the best thing you could do would be to take the old building down and build a new one. The State Board of Health will undoubtedly cause you to renovate the whole of the old building.

With a new building, with new heating apparatus, you would save quite an item in the way of fuel. The old building has poor windows and they would all be refitted and gone over, which is not included in the estimate. Very respectfully,

W. H. FLOYD,
Architect.

ACTION OF THE BOARD.

Resolved, The order of this Board, as heretofore made, is hereby reaffirmed.

Petition of W. R. Bailey, of Windfall, for a permit to discharge waste from his cannery into Turkey Creek:

To the State Board of Health:

The undersigned represents to the Board that he is the owner of a canning factory at Windfall, Tipton County, Indiana; that he is operating said factory in the business of canning tomatoes and other vegetables, and is working about 100 employes; that none of the pomice or other vegetable refuse is permitted to escape or be taken from his premises, but in the operation of the factory in canning tomatoes and the like it is necessary to permit the escape of the waste water into a stream nearby, to wit, Turkey Creek, which flows into Wildcat Creek, three miles away at least;

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that he is advised and believes that the waste water from his factory may be and is being safely discharged into Turkey Creek at its present and usual stage during the manufacturing season, without injury to the public.

He respectfully asks the Board to inspect said Turkey Creek at and below the point of discharge, and upon such inspection being made, grant and issue to him a written permit allowing such discharge into said stream for the months of August, September and October of this and future years. The factory is not operated in the other months of the year.

Respectfully submitted,

W. R. BAILEY.

An inspection of the conditions at Windfall was made by James L. Anderson, and his report is attached.

I have the honor to report that I visited the canning factory of W. R. Bailey, at Windfall, Tipton County, and inspected it as per your instruction. I found as follows, viz.:

The factory has a capacity of 3,000 bushels of tomatoes per day, and employs from 100 to 300 hands when running. Owing to the drouth and late crop, has only run a few days this season. The pomice and offal from his factory is hauled out into the country and thrown on high ground as a fertilizer. The water from the vegetables is run in a wooden tank and from there is distributed by an iron pipe over his ground about 150 yards from the factory. Nothing but the waste water from the engines and from the floors is permitted to run into the little branch called Turkey Creek, which is about one-fourth of a mile from the factory. Practically no waste reaches Turkey Creek from the factory and no pomice has been emptied into the branch for two years or longer, though previous to that time it had been done without complaint from the property owners along the creek. I also interviewed the following persons, residents of the town and vicinity:

Dr. Longfellow, Health Officer, states that he is continually crossing the stream in all directions near the town and has heard no complaints on account of the contamination of the water and knows of none.

Mr. George Summers, of "The Windfall Dry Goods Co.," states that his father was a stockholder in the factory from 1890, the year it was started, up to 1899. That there has been no complaint on account of the contamination of the water from it, although they emptied all the offal into the stream at that time. That his father owned a farm up to that time about one and one-fourth miles north

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of Windfall, through which the stream called Turkey Creek ran, and that his cattle and horses drank from the stream at all times and that he had never noticed any difference in the water.

Mr. Matthews, a farmer, living three miles from the factory, states that he has been employed by Mr. Bailey for three years to haul the offal and pomice from this factory and has been disposing of it on high ground of a farm away from town.

Mr. William Owens, farmer, says: The creek runs through my farm (a part of the Summers farm spoken of before) and stock won't drink the water. I have an old gravel pit that is full of water, and raise fish in it. The fish always die about the time the canning factory starts. They have not died this year. I have not seen any offal in the creek this year. Have been told that the fish above me have died, and the smell was just awful bad. Have seen no dead fish myself. I do not know what would cause the water to be bad unless it is the offal from the canning factory. It is that way every year until a good rain comes to wash the stream out; after it is washed out the stock drink it all right.

A man named Legg, and his son, seem to be the only other parties that are complaining, and I made the investigation more to satisfy the Board than because there was any ground for it. Mr. Legg, Sr., is a banker, and Mr. Bailey does not patronize him. Mr. Owens' fish are dynamited every year about the time the factory starts. They were killed this year, but he doesn't know it yet. Turkey Creek has not had enough water in it this season to let fish six inches long get to the place where the waste water empties into it, therefore, there could not be such a stench from dead fish as Mr. Owens' informant claimed. The water is unfit for use, as it is covered with a green scum most of the way for a mile north from the railroad bridge, where the waste water empties into it, and will not be until a good freshet comes to clear it out. Lastly, the creek is not contaminated by waste from the factory, as none gets into it.

I therefore recommend that the permit be granted, with the proviso that the pomice be not allowed to be thrown into the stream, but disposed upon high ground away from town, as is now being done.

No action was taken because the factory is now closed for the year.

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VISIT BY A DELEGATION OF FARMERS TO CONFER IN REGARD TO STREAM POLLUTION.

Mr. J. Henry Koontz, accompanied by Mr. Albert Baker, attorney for the Indianapolis Water Company, and six gentlemen introduced as farmers from Madison and Delaware counties, asked a hearing before the Board on the matter of stream pollution. As the time appointed for this meeting was almost consumed, and as Dr. Cook was compelled to go home on account of the serious illness of his son, it was mutually agreed between all parties that a special meeting to consider the matter would be held Thursday, October 24, at 10 a. m. in the Board's rooms in the Capitol Building.

Opinions of the Attorney-General in the response to requests from the Secretary:

July 18, 1901.

Hon. W. L. Taylor, Attorney-General, City:

Dear Sir—The Health Officers of Parke and Vermillion counties are very anxious to learn who is responsible under the following circumstances:

On an island in the Wabash, which is not claimed by either county, was found a small camp of persons which was infected with smallpox. At this camp frequent orgies were held, and it was likely, on account of the many visitors on the island, that smallpox would be spread over the surrounding country. Indeed, several cases were directly traced to the camp upon the island. The Health Officer of Vermillion County, Dr. Loomis, invaded the island, established a quarantine, and in order to do so, employed guards. By this means, and through enforcing other sanitary measures, the smallpox was entirely suppressed. The question now arises, can Vermillion County be held for the expense? And if not, is there any provision under the law by which the cost of this sanitary work may be defrayed? Very respectfully,

SECRETARY.

July 29, 1901.

State Board of Health:

Gentlemen—I am in receipt of your inquiry respecting the payment of the expenses of establishing a quarantine and suppressing smallpox in a camp on an island in the Wabash River, between Parke and Vermillion counties.

Section 2 of the act of February 7, 1899, amending Section 8 of the act of 1891, defines the powers and duties of the County Boards of Health. It makes it the duty of such Board to "protect the public health by the removal of causes of diseases when known and in all cases to take prompt action to arrest the spread of contagious and infectious diseases," etc.

Their jurisdiction is not strictly limited to the country. It is entirely proper for the County Commssioners of both Parke and Vermillion coun-

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ties to stamp out smallpox even though it be on an island in the Wabash, that is "no man's island." Smallpox will kill just the same on "no man's island" as in somebody's palace.

I advise that you recommend to the County Commissioners of Parke and Vermillion counties that they divide the expenses occasioned by the establishing a quarantine and suppressing smallpox. If Parke County then refuses to pay her share, it will be the duty of Vermillion County to pay the entire expense, as her Health Officers had authority to contract the indebtedness. I have the honor to be,

Very truly yours,
W. L. TAYLOR,
Attorney-General.

August 5, 1901.

Hon. Wm. Taylor, Attorney-General, City:

Dear Sir—We have several inquiries from city and town Health Officers asking how far beyond corporation lines cities and towns have jurisdiction in health matters?

The State Board of Health respectfully requests your opinion in this matter.

Respectfully,
SECRETARY.

August 20, 1901.

State Board of Health:

Gentlemen—In answer to your question as to how far beyond the corporation lines cities and towns have jurisdiction in health matters, I have to say that in the case of the cities under special charters, namely, Indianapolis, Evansville, Ft. Wayne, Terre Haute and South Bend, the same provision is made. These cities have an extra territorial jurisdiction of ten miles from the corporate limits "to authorize the cleaning and purification of water and water courses by the Board of Public Works, to prevent encroachment or injury to the bank thereof, or the casting into the same of offal, dead animals, logs, rubbish, dirt or impure liquids of any kind whatever."

For other purposes of the Board of Health extra territorial jurisdiction of these cities is four miles. For all other cities in the State the extra territorial jurisdiction for health is two miles. I can find no provision in the statutes giving towns any extra territorial jurisdiction whatever.

I have the honor to be, very truly yours,

W. L. TAYLOR,
Attorney-General.

The following order was passed upon the motion of Dr. Hurty:

HEALTH ORDER.

Whereas, Smallpox in typical and atypical form now exists, and has existed in Indiana for the past three years, causing many deaths and great alarm to the people and detriment to business, and,

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Whereas, Many physicians are unfamiliar with either the typical or atypical forms of smallpox, and, in consequence, mistakes in diagnosis of this dangerous disease are continually being made to the danger of the health and life of the people, it is, therefore,

Ordered, That while smallpox exists in Indiana—and the time of its disappearance will be officially announced by the State Board of Health—it shall be the duty of all physicians to immediately report to the Health Officer having jurisdiction, all cases of eruptive disease which even remotely resemble smallpox, and which may come under their care, and isolate until action has been taken by the Health Officer. It shall then be the duty of the Health Officer to promptly quarantine the case or cases of eruptive disease reported until fourteen days have elapsed from the time of outbreak, or until the eruptive disease is positively determined not to be smallpox. Any physician failing to report or any Health Officer failing to quarantine, or any person failing to remain in quarantine as herein ordered, shall be fined in any sum not less than $10, nor more than $100.

Special Action in Regard to Smallpox.

Where a person has been exposed to smallpox and returns to his or her family, how shall the case be handled? Shall the whole family be held in quarantine for fourteen days, or only the person who was exposed directly to the disease?

In regard to the above, it is ordered, that in instances where a person, who has been exposed to smallpox, returns to his or her family, that all concerned shall be vaccinated and disinfected, and if they can be trusted they can be allowed to go their way, provided they will promise to present themselves to the Health Officer for examination after twelve days from date of exposure and every day thereafter until fifteen days have passed after first day of exposure. If these conditions are refused or rejected the Health Officer shall quarantine all concerned for a period of fourteen days from day of exposure.

Adjourned.

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ANNUAL STATISTICAL REPORT

FOR THE YEAR 1901.

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TABLE 1.

Showing Deaths from All Causes by Months, Ages, Color, Nationality, and Condition, for the Year Ending December 31, 1901. Bertillon Classification.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
All causes (stillbirths included)	3,667	3,561	3,443	3,096	2,657	2,381	3,372	3,092	2,976	2,797	2,600	2,902
Stillbirths	176	154	164	151	149	146	137	136	148	124	140	170
Typhoid fever	74	50	49	41	35	27	81	148	198	222	185	88
Intermittent fever	17	5	13	8	11	14	32	31	26	21	7	12
Smallpox	2	2	4	1	3	3	1	.....	1	2	1	1
Measles	14	22	37	37	31	10	7	2	.....	.....	.....	1
Scarlet fever	24	18	27	18	9	12	5	5	4	3	10	14
Whooping cough	17	26	24	24	14	7	13	17	14	6	10	9
Diphtheria and croup	110	61	39	29	23	23	15	24	38	74	56	62
Influenza	269	349	180	128	42	12	9	10	3	5	12	30
Cholera nostras	.....	.....	.....	1	2	2	7	15	5	1	.....	.....
Dysentery	6	3	4	5	3	9	43	75	62	25	15	13
Erysipelas	9	13	8	11	6	4	4	4	.....	5	9	11
Other epidemic diseases	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	3
Pyaemia and septicemia	21	13	26	23	18	24	24	19	25	20	16	19
Anthrax	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rabies	.....	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....
Tuberculosis of the larynx	4	4	5	7	3	4	1	8	5	5	5	3
Tuberculosis of the lungs	364	386	383	401	375	306	348	346	261	297	316	332
Tuberculosis of the meninges	4	16	13	17	13	14	20	17	6	10	14	9
Abdominal tuberculosis	8	15	11	10	17	12	20	23	21	22	10	18
Potts' disease	1	1	3	1	1	1	1	.....	.....	1	.....	1
Cold abscess	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
White swelling	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Tuberculosis of other organs	1	5	14	8	2	7	1	5	4	5	3	5
General tuberculosis	7	13	4	5	7	4	3	4	12	10	8	2

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TABLE 1—Continued.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Scrofula	1	2	5	3	2	3	4	2	1	1	.....	.....
Syphilis	8	3	3	4	1	5	6	5	3	2	5	4
Cancer of the mouth	6	4	2	3	1	5	2	.....	7	3	5	1
Cancer of stomach and liver	40	27	22	38	34	39	50	27	42	37	33	31
Cancer of peritoneum, intestines and rectum	7	5	8	9	7	8	5	4	7	9	7	6
Cancer of female genital organs	8	22	16	18	8	9	14	16	20	10	14	12
Cancer of the breast	14	12	13	2	6	8	13	7	11	13	10	5
Cancer of the skin	5	4	5	7	6	8	15	5	10	7	10	8
Cancer of other organs	24	10	19	4	15	19	21	15	18	16	18	22
Other tumors	5	4	2	3	3	3	3	10	5	8	2	4
Acute articular rheumatism	7	6	13	16	11	11	9	7	4	9	2	8
Chronic rheumatism and gout	6	7	6	8	8	8	7	9	8	4	3	7
Scurvy	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes	18	22	18	19	21	19	19	4	18	15	13	18
Exophthalmic goiter	3	1	1	.....	4	1	5	3	2	2	1	1
Addison's disease	.....	.....	1	2	.....	1	4	1	2	.....	.....	1
Leukemia	1	1	2	.....	4	2	4	2	2	3	1	2
Anemia and chlorosis	9	12	15	7	14	8	19	10	10	5	7	8
Other general diseases	8	4	.....	1	.....	1	5	.....	2	.....	3	1
Alcoholism, acute and chronic	6	11	6	5	3	2	7	4	6	10	4	3
Lead poisonings	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other chronic poisonings	4	.....	2	.....	.....	1	.....	.....	.....	2	.....	.....
Encephalitis	21	20	14	16	23	13	20	13	10	12	9	18
Simple meningitis	42	49	50	54	39	45	46	52	54	44	38	40
Epidemic cerebro-spinal meningitis	18	24	29	23	17	12	23	20	28	17	9	16
Progressive locomotor ataxia	4	2	3	.....	6	1	4	1	3	4	1	3
Other diseases of spinal cord	12	10	7	10	14	11	16	6	13	13	10	6
Congestion and hemorrhage of brain	105	96	97	113	95	108	136	103	102	89	93	127
Softening of the brain	11	14	23	8	9	10	15	8	4	12	9	6
Paralysis, cause unspecified	102	90	68	90	80	73	102	78	60	78	82	83

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General paralysis	1	10	2	2	8	6	6	6	4	2	1	8
Other forms of insanity	11	6	7	7	5	7	8	6	6	6	4	4
Epilepsy	13	12	8	9	12	5	17	10	9	12	13	9
Convulsions (not puerperal)	3	.....	2	5	4	6	4	2	2	4	5	1
Convulsions of infants	33	36	43	32	29	40	51	27	29	35	25	26
Tetanus	5	2	3	2	9	4	15	6	7	3	6	1
Chorea	.....	1	1	3	2	5	.....	1	.....	.....	.....	1
Other nervous diseases	18	14	12	18	22	17	13	14	18	13	11	13
Diseases of the ear	2	1	.....	1	3	1	1	.....	.....	.....	.....	1
Pericarditis	6	6	11	5	8	7	7	6	8	2	6	4
Acute endocarditis	15	11	10	8	12	7	17	8	13	8	3	13
Organic heart disease	158	148	148	152	146	141	151	147	130	129	150	154
Angina pectoris	16	10	15	14	10	9	10	15	20	9	21	12
Diseases of the arteries, atheroma, aneurism	6	11	3	10	8	5	6	4	6	7	9	11
Embolism and thrombosis	.....	2	4	3	2	4	3	1	5	3	1	3
Diseases of the veins (varices, hemorrhoids, phlebitis)	.....	.....	1	2	.....	3	.....	1	3	.....	.....	1
Diseases of the lymphatics, lymphangitis	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	1
Hemorrhage	3	3	9	.....	6	5	6	10	5	12	8	12
Other diseases of circulatory system	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Diseases of the nasal fossæ	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the larynx	13	9	4	2	3	2	2	2	3	5	2	14
Diseases of the thyroid body	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....
Acute bronchitis	69	60	59	44	28	15	9	9	5	18	23	38
Chronic bronchitis	21	28	24	24	15	4	10	8	12	12	16	11
Broncho pneumonia	54	86	91	68	38	12	16	9	18	21	26	41
Pneumonia	558	550	512	360	214	85	37	54	55	102	155	307
Pleurisy	5	7	5	6	1	5	.....	2	1	1	5	3
Congestion of the lungs, pulmonary apoplexy	43	37	43	38	28	23	19	11	17	33	21	41
Gangrene of the lung	.....	1	1	.....	.....	1	.....	1	1	1	1	.....
Asthma	18	17	9	10	3	12	9	4	8	10	15	12
Pulmonary emphysema	4	.....	1	2	1	2	.....	2	1	.....	1	.....
Other diseases of the respiratory system (phthisis excepted)	24	9	9	20	13	5	17	14	3	14	13	15
Diseases of the mouth and adnexa	1	5	3	1	1	.....	3	8	4	4	4	2
Diseases of the pharynx	3	1	2	5	4	.....	2	2	6	6	7	3
Diseases of the esophagus	1	.....	.....	.....	1	.....	.....	1	.....	1	.....	.....
Ulcer of the stomach	5	6	1	4	4	6	5	5	6	7	3	4
Other diseases of the stomach (cancer excepted)	47	45	57	49	45	45	65	60	68	78	53	36
Diarrhea and enteritis (under four years)	14	12	17	26	19	81	468	500	393	167	64	15
Diarrhea, chronic	.....	3	8	2	1	2	17	.....	1	.....	.....	.....
Diarrhea and enteritis (four years and over)	24	16	12	9	22	17	63	79	54	46	24	29

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TABLE 1—Continued.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Intestinal parasites	1	1	.....	1	.....	.....	1	.....	1	.....	.....	1
Hernia, intestinal obstructions	19	9	13	19	17	14	22	16	14	14	18	28
Other diseases of the intestines	26	15	20	27	27	27	38	48	38	38	30	28
Acute yellow atrophy of liver	.....	.....	1	1	.....	.....	2	1	1	.....	.....	.....
Cirrhosis of the liver	12	13	16	13	9	10	5	17	16	17	17	15
Biliary calculi	2	2	.....	.....	4	3	4	1	5	.....	1	5
Other diseases of the liver	24	23	39	32	30	23	24	27	20	26	27	25
Diseases of the spleen	1	1	1	.....	.....	.....	2	.....	1	1	1	1
Simple peritonitis (not puerperal)	29	22	21	27	30	32	41	35	31	32	19	35
Other diseases of the digestive system (cancer and tub. ex.)	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Appendicitis and iliac abscess	12	8	15	9	9	15	16	4	18	5	10	16
Acute nephritis	11	12	15	16	11	12	15	13	8	12	7	10
Bright's disease	121	97	87	71	94	80	82	74	82	80	101	97
Other diseases of kidneys and adnexa	2	2	6	6	5	3	5	3	11	2	1	9
Urinary calculus	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the bladder	11	13	14	14	10	14	14	9	14	10	15	8
Diseases of the prostate	3	3	4	2	3	2	2	5	3	5	2	4
Non-venereal diseases of the male genital organs	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Metritis	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1
Uterine hemorrhage (not puerperal)	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....
Uterine tumor (not cancerous)	.....	1	3	.....	1	.....	.....	1	2	2	.....	.....
Other diseases of the uterus	.....	2	2	1	2	2	2	2	1	3	7	2
Ovarian cysts and other ovarian tumors	4	4	2	3	3	1	2	5	.....	1	1	3
Other diseases of female genital organs	.....	.....	.....	2	3	.....	2	.....	.....	2	1	4
Accidents of pregnancy	14	9	9	5	4	1	6	5	3	5	5	3
Puerperal hemorrhage	2	3	.....	2	4	1	6	4	3	1	.....	1
Other accidents of labor	.....	.....	2	1	.....	.....	1	2	1	1	.....	.....
Puerperal septicemia	24	32	23	34	24	10	9	12	14	15	20	17
Puerperal albuminuria and convulsions	6	5	4	2	5	4	12	5	2	4	5	4
Puerperal phlegmasia alba dolens	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1

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Other accidents of pregnancy, sudden death	.....	1	.....	1	.....	1	.....	1	.....	.....	.....	.....
Gangrene	4	2	7	8	4	5	8	1	7	7	1	11
Carbuncle	1	1	2	2	.....	.....	.....	4	3	.....	.....	4
Phlegmon, acute abscess	.....	1	1	.....	1	2	1	2	1	6	1	1
Other diseases of the skin and adnexa	1	2	3	2	1	3	2	1	1	6	1	2
Diseases of the bones, non-tuberculous	5	.....	.....	.....	.....	3	2	1	1	.....	.....	2
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)	.....	.....	.....	3	2	1	.....	1	.....	1	1	.....
Other diseases of organs of locomotion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Congenital malformations (still-births not included)	9	15	21	16	24	14	15	13	15	10	6	22
Congenital debility, icterus and sclerema	117	114	114	103	77	93	117	93	90	84	92	81
Other diseases peculiar to infancy	6	6	14	6	2	8	5	3	.....	5	2	11
Neglect	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Senile debility	146	132	140	102	80	71	111	85	96	98	97	107
Suicide by poisoning	3	6	7	12	12	10	15	13	12	9	7	6
Asphyxia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Hanging or strangulation	1	2	6	8	8	4	5	4	4	2	1	3
Drowning	1	.....	.....	3	3	.....	2	5	1	.....	.....	1
Firearms	3	2	2	5	10	9	6	4	3	2	4	2
Cutting instruments	1	1	.....	3	.....	.....	1	.....	1	1	1	.....
Crushing	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Other methods	1	3	2	.....	1	2	.....	.....	1	2	2	1
Fractures	10	10	7	8	8	11	13	11	23	12	9	14
Dislocations	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Other accidental injuries	70	44	66	55	53	68	74	77	70	67	68	76
Burning by fire	19	19	17	14	10	7	11	14	8	14	14	18
Burning by corrosive substances	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
Sunstroke	.....	.....	.....	.....	.....	2	85	2	.....	.....	.....	1
Freezing	1	3	1	.....	.....	.....	.....	.....	.....	.....	1	5
Electrical shock	.....	.....	2	.....	5	15	8	.....	2	.....	1	.....
Accidental drowning	3	1	5	3	8	33	33	14	3	1	2	6
Inanition	56	63	54	40	44	57	74	72	81	76	56	44
Inhalation of noxious gases (not suicidal)	.....	2	1	2	.....	2	.....	3	4	2	4	11
Other acute poisoning	2	5	1	10	9	8	7	8	9	4	1	1
Other external violence	1	1	6	1	1	.....	3	.....	1	3	2	8
Homicide	1	4	3	6	9	2	8	2	4	.....	4	4
Mob violence	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dropsy	34	13	8	19	20	7	19	16	11	18	16	13
Sudden death (not puerperal)	6	.....	2	1	.....	.....	1	.....	.....	6	.....	4
Causes not specified or ill defined	25	34	62	39	33	24	24	24	23	26	16	30

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TABLE 1—Continued.

Showing Deaths from All Causes by Months, Ages, Color, Nationality, and Condition, for the Year Ending December 31, 1901. Bertillon Classification.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
All causes (stillbirths included)	8,015	1,505	688	421	281	942	695	1,274	1,714	1,511	1,395	1,274	1,315	1,293	1,373	1,624	1,810	2,116
Stillbirths	1,795																	
Typhoid fever	15	14	12	18	19	91	87	178	177	146	78	70	75	49	34	36	33	25
Intermittent fever	26	12	5	4	3	10	5	14	11	10	4	7	5	7	10	6	7	9
Smallpox	3	2					1		3	1	2	3		2	1	1		
Measles	39	22	15	9	6	14	12	7	9	1	4	6	7	3	2	1	2	
Scarlet fever	7	14	29	18	22	37	8	4	2	3	1		1	1				
Whooping cough	120	31	10	9	3	5	1											
Diphtheria and croup	60	58	65	80	53	143	51	23	7	3	1	3	1	1	2			1
Influenza	66	14	11	5	4	11	6	12	20	22	22	27	33	33	43	41	57	103
Cholera nostras	2	1							2		1		1	1	5	1	6	3
Dysentery	1	3		1	5	16		5	5	6	12	8	5	6	10	12	17	31
Erysipelas	25	5				2	1		4	1	3	1	3		2	6	12	3
Other epidemic diseases	2		1			1									1			
Pyaemia and septicemia	30	8	1	2	3	7	5	14	19	20	22	16	11	12	19	16	6	7
Anthrax																	1	
Rabies							1		1	1								
Tuberculosis of the larynx	2					1		3	9	10	6	8	1	1	3	3	5	
Tuberculosis of the lungs	74	35	14	12	7	27	84	386	667	549	484	348	286	222	171	163	177	148
Tuberculosis of the meninges	39	17	13	9	6	22	6	9	7	5	1	6	3	3		3	1	3
Abdominal tuberculosis	13	6	5		1	8	5	10	20	16	13	13	8	11	7	13	12	10
Potts' disease	1			1			1	1	1	1	1			1	1	2		
Cold abscess												1						
White swelling						1												
Tuberculosis of other organs	4				1	2	3	6	2	1	10	5	5	4	1	3	2	7
General tuberculosis	2	4	2	1	2	2		2	12	13	4	5	7	6	2	3	3	3

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Scrofula	6	1	2	.....	.....	3	1	4	1	3	1	.....	.....	.....	.....	.....	.....	2
Syphilis	17	2	4	.....	.....	1	.....	.....	2	.....	4	4	3	4	5	.....	.....	3
Cancer of the mouth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	2	1	1	4	10
Cancer of the stomach and liver	2	.....	2	.....	.....	.....	.....	.....	2	3	4	7	20	34	30	60	60	75
Cancer of peritoneum, intestines and rectum	.....	.....	.....	.....	.....	.....	.....	.....	2	4	2	2	3	8	9	8	12	13
Cancer of female genital organs	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	5	8	18	33	27	18	19	15
Cancer of the breast	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	6	12	14	14	14	13	12
Cancer of the skin	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	2	1	6	7	10	14
Cancer of other organs	1	.....	1	1	.....	2	1	1	.....	8	5	6	10	18	26	27	18	24
Other tumors	1	.....	.....	2	.....	.....	1	2	.....	1	2	2	3	9	5	6	7	2
Acute articular rheumatism	1	1	2	1	.....	10	11	8	11	3	2	7	1	5	4	9	7	6
Chronic rheumatism and gout	.....	.....	.....	.....	.....	.....	1	1	1	1	1	1	.....	3	6	13	8	9
Scurvy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes	.....	.....	1	1	1	7	7	14	2	8	9	8	12	13	11	18	22	20
Exophthalmic goiter	.....	.....	1	.....	.....	.....	.....	1	1	1	1	2	5	3	5	1	.....	2
Addison's disease	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	.....	3	3	1	.....	1
Leukemia	1	1	1	1	.....	1	1	1	1	1	1	3	.....	1	2	3	1	2
Anemia and chlorosis	15	3	2	1	.....	1	5	2	6	6	8	8	8	5	6	11	9	12
Other general diseases	3	.....	.....	.....	.....	.....	.....	2	1	.....	.....	3	2	1	1	1	2	5
Alcoholism, acute and chronic	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	7	7	9	9	8	7	5	4
Lead poisonings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Other chronic poisonings	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	1	1	.....	.....	.....	2
Encephalitis	71	26	10	5	2	5	4	6	6	5	5	7	1	6	5	5	4	4
Simple meningitis	180	89	32	17	13	39	20	16	16	22	22	16	15	15	7	11	2	7
Epidemic cerebro-spinal meningitis	73	35	21	16	10	21	19	8	6	3	4	3	4	3	1	1	3	1
Progressive locomotor ataxia	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	4	3	3	5	2	1	1
Other diseases of spinal cord	17	2	4	.....	.....	3	1	3	2	3	2	3	8	6	9	8	15	10
Congestion and hemorrhage of brain	123	40	10	10	7	11	16	9	12	10	20	30	38	57	74	105	136	130
Softening of the brain	.....	1	.....	.....	.....	1	3	.....	.....	1	1	2	3	3	9	9	19	18
Paralysis, cause unspecified	5	2	.....	6	.....	9	4	4	9	8	10	19	26	22	49	82	78	129
General paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	12	7	5	3	9	3
Other forms of insanity	.....	.....	.....	.....	.....	.....	.....	.....	1	2	4	10	13	8	4	11	5	6
Epilepsy	4	.....	.....	1	.....	4	6	10	21	15	15	11	10	2	11	5	6	2
Convulsions (not puerperal)	.....	.....	.....	.....	.....	11	3	2	5	1	3	1	.....	1	4	2	2	.....
Convulsions of infants	345	34	13	10	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tetanus	13	1	.....	1	1	8	7	6	6	5	3	4	3	1	1	1	.....	1
Chorea	1	.....	.....	.....	.....	1	4	2	3	.....	.....	1	.....	.....	.....	.....	.....	.....
Other nervous diseases	11	4	6	.....	1	7	5	9	2	6	9	13	12	7	14	12	11	11
Diseases of the ear	5	.....	.....	.....	.....	2	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1
Pericarditis	.....	.....	.....	.....	.....	3	2	6	3	6	1	2	3	1	4	3	7	7

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TABLE 1—Continued.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
Acute endocarditis	3	.....	.....	.....	1	7	4	10	2	.....	4	8	4	10	6	10	8	13
Organic heart disease	26	3	5	2	1	18	26	27	28	28	26	50	74	91	103	156	196	260
Angina pectoris	3	.....	.....	.....	.....	1	1	1	3	3	5	4	6	12	8	19	21	17
Dis of the arteries, atheroma, aneurism	1	.....	.....	1	.....	.....	.....	.....	1	1	1	1	3	3	4	4	8	12
Embolism and thrombosis	1	.....	.....	.....	.....	.....	.....	1	1	3	2	1	1	.....	4	1	3	2
Diseases of the veins (varices, hemorrhoids, phlebitis)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	4	1	2
Diseases of the lymphatics, lymphangitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....	.....
Hemorrhage	23	2	.....	1	1	5	1	3	4	1	3	3	6	5	2	4	9	3
Other diseases of circulatory system	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Diseases of the nasal fossæ	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the larynx	12	6	4	9	3	10	2	.....	1	2	1	2	.....	1	.....	.....	2	1
Diseases of the thyroid body	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Acute bronchitis	174	35	17	7	2	7	3	2	3	7	2	3	3	5	5	5	10	16
Chronic bronchitis	3	1	1	.....	.....	.....	.....	1	2	2	1	2	4	5	1	5	15	25
Broncho pneumonia	173	62	25	21	8	19	7	10	3	6	6	6	5	5	10	9	17	20
Pneumonia	477	168	93	49	35	91	55	120	120	109	104	104	123	97	131	152	182	203
Pleurisy	1	.....	.....	.....	.....	1	1	2	.....	1	2	1	5	.....	4	3	3	5
Congestion of the lungs, pulmonary apoplexy	108	18	5	3	3	10	4	9	7	4	5	11	14	8	18	18	19	21
Gangrene of the lung	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Asthma	1	.....	.....	2	.....	1	.....	1	.....	1	.....	3	2	6	6	12	20	24
Pulmonary emphysema	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	2	2	1	.....	1	2
Other diseases of the respiratory system (phthisis excepted)	15	5	1	1	1	7	6	6	9	7	9	3	5	8	12	13	10	12
Diseases of the mouth and adnexa	21	5	3	.....	.....	2	.....	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Diseases of the pharynx	3	5	2	2	4	10	4	2	2	2	2	.....	.....	.....	.....	1	.....	1
Diseases of the esophagus	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Ulcer of the stomach	2	.....	.....	.....	1	.....	1	.....	1	4	2	1	2	5	7	5	5	7
Other diseases of the stomach (cancer exc'd)	137	37	10	7	4	9	11	10	17	8	21	13	21	29	22	36	50	61
Diarrhea and enteritis (under four years)	1103	506	137	27	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhea, chronic	12	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	3	5	6
Diarrhea and enteritis (four years and over)	.....	.....	2	.....	9	20	9	8	7	7	19	10	7	15	16	30	34	51

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Intestinal parasites	.....	3	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hernia, intestinal obstructions	20	.....	5	.....	1	7	7	6	2	8	3	12	9	13	16	12	17	23
Other diseases of the intestines	113	31	13	6	4	8	6	9	6	9	10	9	13	12	8	13	14	20
Acute yellow atrophy of liver	1	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	.....	1	.....	.....	.....	1
Cirrhosis of the liver	.....	1	.....	.....	.....	.....	1	2	2	7	5	12	15	14	23	21	13	23
Biliary calculi	2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2	3	4	.....	1	6
Other diseases of the liver	40	3	2	1	.....	4	2	7	8	12	4	15	17	24	23	32	32	31
Diseases of the spleen	1	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	3	.....
Simple peritonitis (not puerperal)	15	7	3	3	4	18	29	37	31	31	39	22	24	23	7	19	12	10
Other diseases of the digestive system (cancer and tub. excepted)	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Appendicitis and iliac abscess	.....	.....	1	.....	.....	12	14	17	18	16	9	7	5	12	9	3	6	2
Acute nephritis	12	1	3	6	3	6	8	4	3	7	9	8	6	13	5	8	2	10
Bright's disease	12	7	6	1	2	9	7	24	27	31	31	29	57	55	78	99	112	132
Other diseases of kidneys and adnexa	3	.....	.....	1	1	1	2	.....	1	2	.....	1	1	4	2	1	3	10
Urinary calculus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Diseases of the bladder	6	.....	.....	.....	.....	1	.....	.....	2	.....	.....	1	4	2	2	6	11	9
Diseases of the prostate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	1	4
Non-venereal diseases of the male genital organs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Metritis	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
Uterine hemorrhage (not puerperal)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....
Uterine tumor (not cancerous)	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	1	1	1	2	.....	1
Other diseases of the uterus	.....	.....	.....	.....	.....	1	1	1	5	7	2	3	3	2	.....	.....	.....	.....
Ovarian cysts and other ovarian tumors	.....	.....	.....	.....	.....	.....	.....	1	1	1	1	5	3	1	3	3	8	1
Other diseases of female genital organs	.....	.....	.....	.....	.....	.....	.....	2	2	2	.....	3	1	2	.....	.....	.....	1
Accidents of pregnancy	.....	.....	.....	.....	.....	.....	.....	2	12	19	18	12	4	1	.....	.....	.....	.....
Puerperal hemorrhage	.....	.....	.....	.....	.....	.....	.....	.....	1	3	7	9	6	1	.....	.....	.....	.....
Other accidents of labor	.....	.....	.....	.....	.....	.....	.....	.....	2	2	1	3	.....	.....	.....	.....	.....	.....
Puerperal septicemia	.....	.....	.....	.....	.....	.....	.....	35	43	51	42	31	22	3	1	.....	.....	.....
Puerperal albuminuria and convulsions	.....	.....	.....	.....	.....	.....	.....	10	12	11	11	10	3	1	.....	.....	.....	.....
Puerperal phlegmasia alba dolens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....
Other accidents of pregnancy, sudden death	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	1	.....	.....	.....	.....
Gangrene	2	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	1	1	1	5	5	4
Carbuncle	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	1	2	3
Phlegmon, acute abscess	3	1	.....	.....	.....	1	.....	1	1	.....	4	.....	1	.....	2	1	1	1
Other diseases of the skin and adnexa	15	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	.....	1
Diseases of the bones, non-tuberculous	2	2	1	.....	.....	2	.....	.....	2	.....	1	.....	1	.....	1	.....	.....	.....
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	1	1	.....	.....	1	1	.....
Other diseases of organs of locomotion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Cong'l malformations (stillbirths excepted)	175	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital debility, icterus and sclerema	1149	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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TABLE 1—Continued.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
Other diseases peculiar to infancy	68																	
Neglect	4																	
Senile debility																		2
Suicide by poisoning								10	18	16	12	10	9	7	10	7	4	3
Asphyxia		1																
Hanging or strangulation								2	5	2	3	4	3	5	6	2	5	5
Drowning								1	2	1		1	2	1	2	3	2	
Firearms							2	5	7	13	3	3	4	7	1	3	3	1
Cutting instruments								1	1		2				1	1		1
Crushing													1					
Other methods								1	3		2		3		3	1	1	1
Fractures		1	2	2	1	4	5	5	11	5	9	5	4	3	6	10	6	6
Dislocations										1								
Other accidental injuries	43	8	8	1	5	34	36	64	86	66	65	43	49	39	57	40	32	24
Burning by fire	8	12	20	15	9	21	12	8	7	8	3	5	7	4	5	3	1	5
Burning by corrosive substances									2	1	1							
Sunstroke	6					1		1		2	4	6	7	4	5	4	11	13
Freezing									1		1	1		1	2		3	
Electrical shock	1						2	7	7	2	5		1	2	2		3	
Accidental drowning	2	5		1	2	9	28	17	12	8	2	6	5	3	4			
Inanition	635	20	7		10	3	2			1				3	4	1	2	9
Inhalation of noxious gases (not suicidal)	8	1	1					1	2		2	3				1	7	1
Other acute poisoning	3	8	3	5	1	1	1	3	9	4	3	4	3	4	4	2	3	1
Other external violence	4	2	4		1	2			3	2	1		2	1	1	3		
Homicide	2						1	1	12	5	9	4	4	6	2	1		
Mob violence											1							
Dropsy	3	1		2	1	2		2	5	3	3	6	4	9	13	16	20	22
Sudden death (not puerperal)	3			1	1	1			1			1		1	1	2	3	1
Causes not specified or ill defined	108	18	9	1	3	5	3	4	12	11	6	10	9	8	17	14	19	43

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TABLE 1—Continued.

Showing Deaths from All Causes by Months, Ages, Color, Nationality, and Condition, for the Year Ending December 31, 1901. Bertillon Classification.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widower.	Widow.	Not Reported.	Total.
All causes (stillbirths included)	2,225	2,115	2,390	337	231	35,252	1,292	32,123	3,371	1,050	17,056	12,119	2,186	3,939	1,244	36,544
Stillbirths	.....	.....	.....	.....	.....	1,726	69	1,795	.....	.....	1,795	.....	.....	.....	.....	1,795
Typhoid fever	24	5	8	.....	4	1,163	35	1,134	41	23	639	470	20	35	34	1,198
Intermittent fever	19	9	11	1	2	190	7	178	14	5	90	64	8	26	9	197
Smallpox	.....	.....	2	.....	.....	19	2	19	.....	2	8	9	2	1	1	21
Measles	1	1	.....	.....	.....	158	3	160	.....	1	135	21	1	2	2	161
Scarlet fever	.....	.....	.....	.....	2	148	1	147	1	1	145	3	.....	.....	1	149
Whooping cough	.....	.....	.....	.....	2	177	4	181	.....	.....	180	1	.....	.....	.....	181
Diphtheria and croup	.....	.....	.....	.....	2	541	13	545	3	6	541	5	1	1	6	554
Influenza	159	151	180	26	3	1,027	22	846	160	43	218	406	115	271	39	1,049
Cholera nostras	4	1	3	2	.....	31	2	23	9	1	8	10	3	9	3	33
Dysentery	22	36	52	9	1	256	7	218	36	9	63	80	31	76	13	263
Erysipelas	5	2	8	1	.....	84	.....	76	6	2	49	22	4	8	1	84
Other epidemic diseases	.....	.....	.....	.....	.....	5	.....	4	1	.....	4	1	.....	.....	.....	5
Pyaemia and septicemia	12	10	7	.....	1	243	5	219	19	10	106	94	16	22	10	248
Anthrax	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	1
Rabies	.....	.....	.....	.....	.....	3	.....	3	.....	.....	3	.....	.....	.....	.....	3
Tuberculosis of the larynx	1	1	.....	.....	.....	52	2	51	3	.....	21	27	3	3	.....	54
Tuberculosis of the lungs	104	72	57	2	46	3,878	237	3,775	228	112	1,486	2,036	136	277	180	4,115
Tuberculosis of the meninges	.....	.....	.....	.....	.....	150	3	151	.....	2	128	16	2	3	4	153
Abdominal tuberculosis	7	4	4	.....	1	179	8	174	9	4	78	87	8	9	5	187
Potts' disease	.....	.....	.....	.....	.....	11	.....	11	.....	.....	7	4	.....	.....	.....	11
Cold abscess	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	1
White swelling	1	.....	.....	.....	.....	2	.....	2	.....	.....	1	.....	.....	1	.....	2
Tuberculosis of other organs	2	2	.....	.....	.....	59	1	53	4	3	25	30	.....	5	.....	60
General tuberculosis	3	2	1	.....	.....	72	7	72	3	4	35	31	7	3	3	79

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TABLE 1—Continued.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widower.	Widow.	Not Reported.	Total.
Scrofula	.....	.....	.....	.....	.....	23	1	24	.....	.....	21	3	.....	.....	.....	24
Syphilis	.....	.....	.....	.....	.....	43	6	46	2	1	29	12	2	6	.....	49
Cancer of the mouth	8	5	5	.....	.....	37	2	34	4	1	2	20	9	8	.....	39
Cancer of stomach and liver	57	42	22	.....	.....	411	9	316	91	13	25	259	37	76	23	420
Cancer of peritoneum, intestines and rectum	9	6	4	.....	.....	82	.....	62	19	1	6	50	5	15	6	82
Cancer of female genital organs	6	6	4	1	3	161	6	142	19	6	4	101	.....	54	8	167
Cancer of the breast	11	7	5	.....	1	111	3	101	9	4	13	68	.....	31	2	114
Cancer of the skin	13	16	17	.....	1	90	.....	80	10	.....	9	41	17	17	6	90
Cancer of other organs	20	13	16	3	.....	197	4	167	29	5	20	124	15	28	14	201
Other tumors	3	4	2	.....	.....	51	1	44	7	1	13	21	2	11	5	52
Acute articular rheumatism	5	7	1	.....	1	99	4	92	7	4	44	43	5	9	2	103
Chronic rheumatism and gout	13	12	9	1	1	77	4	67	10	4	9	37	11	19	5	81
Scurvy	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	1
Diabetes	22	17	10	.....	.....	202	2	168	31	5	44	110	19	21	10	204
Exophthalmic goiter	.....	1	.....	.....	.....	24	.....	24	.....	.....	5	16	.....	3	.....	24
Addison's disease	.....	.....	.....	.....	.....	12	.....	12	.....	.....	3	5	2	1	1	12
Leukemia	.....	2	.....	.....	.....	23	1	19	5	.....	9	10	1	3	1	24
Anemia and chlorosis	7	4	5	.....	.....	122	2	107	14	3	37	64	6	13	4	124
Other general diseases	3	.....	.....	1	.....	24	1	21	3	1	8	8	3	5	1	25
Alcoholism, acute and chronic	4	4	.....	.....	1	65	2	41	16	10	25	32	6	.....	4	67
Lead poisonings	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	.....	.....	1
Other chronic poisonings	1	1	.....	.....	.....	9	.....	8	.....	1	1	3	2	2	1	9
Encephalitis	3	4	1	.....	4	182	7	180	5	4	147	30	2	9	1	189
Simple meningitis	6	4	2	.....	2	536	17	528	15	10	437	88	13	9	6	553
Epidemic cerebro-spinal meningitis	1	.....	.....	1	2	234	2	231	1	4	207	18	5	4	2	236
Progressive locomotor ataxia	5	1	1	.....	.....	31	1	31	.....	1	8	16	4	3	1	32
Other diseases of spinal cord	13	11	6	1	1	125	3	111	13	4	40	54	16	13	5	128
Congestion and hemorrhage of brain	152	136	122	10	6	1,233	31	1,036	193	35	326	536	141	212	49	1,264
Softening of the brain	20	22	18	.....	.....	126	3	107	21	1	13	70	12	26	8	129
Paralysis, cause unspecified	156	172	175	16	5	963	23	808	132	46	106	444	136	253	47	986

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General paralysis	2	3	5	1	.....	53	3	44	7	5	6	33	7	9	1	56
Other forms of insanity	7	7	.....	.....	.....	77	1	61	6	8	12	43	9	10	4	78
Epilepsy	1	2	1	.....	3	122	7	107	12	10	89	28	5	3	4	129
Convulsions (not puerperal)	2	.....	.....	.....	1	37	1	34	1	3	23	9	2	2	2	38
Convulsions of infants	.....	.....	.....	.....	.....	385	21	406	.....	.....	406	.....	.....	.....	.....	406
Tetanus	.....	1	.....	.....	.....	58	5	61	1	1	43	17	2	.....	1	63
Chorea	1	1	.....	.....	.....	13	1	13	1	.....	10	3	1	.....	.....	14
Other nervous diseases	17	15	10	1	.....	179	4	160	20	3	64	84	7	22	6	183
Diseases of the ear	.....	.....	.....	.....	.....	10	.....	10	.....	.....	8	1	.....	1	.....	10
Pericarditis	15	6	6	.....	1	70	6	66	7	3	19	37	9	10	1	76
Acute endocarditis	8	17	9	1	.....	120	5	103	18	4	32	61	4	22	6	125
Organic heart disease	268	204	138	13	11	1683	71	1359	309	86	280	886	181	341	86	1754
Angina pectoris	20	19	13	3	2	158	3	134	19	8	15	94	13	28	11	161
Diseases of the arteries, atheroma, aneurism	14	18	13	2	.....	82	4	67	18	1	7	41	14	18	6	86
Embolism and thrombosis	6	4	1	.....	.....	30	1	27	2	2	3	19	4	4	1	31
Diseases of the veins (varices, hemorrhoids, phlebitis)	1	.....	.....	.....	.....	11	.....	9	2	.....	2	9	.....	.....	.....	11
Diseases of the lymphatics, lymphangitis	.....	1	.....	.....	.....	4	.....	4	.....	.....	.....	4	.....	.....	.....	4
Hemmorrhage	.....	2	1	.....	.....	76	3	71	4	4	40	30	1	3	5	79
Other diseases of the circulatory system	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	1
Diseases of the nasal fossæ	.....	.....	.....	.....	.....	2	.....	2	.....	.....	2	.....	.....	.....	.....	2
Diseases of the larynx	3	2	.....	.....	.....	61	.....	61	.....	.....	47	6	.....	5	3	61
Diseases of the thyroid body	.....	.....	.....	.....	.....	3	.....	3	.....	.....	1	1	1	.....	.....	3
Acute bronchitis	23	17	28	3	.....	359	18	335	36	6	261	52	14	43	7	377
Chronic bronchitis	39	31	44	1	2	182	3	123	53	9	15	72	23	66	9	185
Broncho pneumonia	17	19	27	2	3	468	12	444	26	10	344	77	19	33	7	480
Pneumonia	206	166	171	22	11	2850	139	2608	287	94	1310	1045	168	357	109	2989
Pleurisy	4	4	4	.....	.....	38	3	35	5	1	9	16	8	3	5	41
Congestion of the lungs, pulmonary apoplexy	23	26	18	1	.....	349	11	314	36	4	180	97	23	44	10	354
Gangrene of the lung	1	.....	.....	.....	.....	7	.....	5	2	.....	3	2	1	1	.....	7
Asthma	22	9	14	1	2	120	7	82	38	7	9	68	14	30	6	127
Pulmonary emphysema	1	1	.....	.....	.....	14	.....	9	5	.....	4	10	.....	.....	.....	14
Other diseases of the respiratory system (phthisis excepted)	11	9	4	.....	2	148	8	136	12	8	65	71	8	11	1	156
Disease of the mouth and adnexa	1	.....	1	.....	.....	33	3	36	.....	.....	32	3	.....	1	.....	36
Diseases of the pharynx	.....	.....	1	.....	.....	40	1	39	1	1	34	5	.....	.....	2	41
Diseases of the esophagus	.....	.....	1	.....	.....	4	.....	3	1	.....	1	2	.....	.....	1	4
Ulcer of the stomach	6	2	4	.....	1	55	1	47	7	2	9	34	3	7	3	56
Other diseases of the stomach (cancer excep'd)	49	50	34	6	6	632	16	547	85	16	276	222	42	80	28	648
Diarrhea and enteritis (under four years)	.....	.....	.....	.....	.....	1746	30	1774	1	1	1776	.....	.....	.....	.....	1776
Diarrhea, chronic	.....	1	3	.....	.....	33	1	29	3	2	16	11	2	4	1	34
Diarrhea and enteritis (four years and over)	44	45	49	11	2	386	9	316	62	17	90	173	41	70	21	395

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TABLE 1—Continued.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widower.	Widow.	Not Reported	Total.
Intestinal parasites						6		6			6					6
Hernia, intestinal obstructions	14	21	7			199	4	162	35	6	60	85	12	41	5	203
Other diseases of the intestines	20	19	16	3		350	12	321	36	5	205	91	17	37	12	362
Acute yellow atrophy of liver						5	1	6			3	3				6
Cirrhosis of the liver	11	5	5			158	2	124	31	5	28	88	20	18	6	160
Biliary calculi	3	2	2			27		22	4	1	4	16	1	4	2	27
Other diseases of the liver	22	20	15	1	5	308	12	276	36	8	82	150	22	50	16	320
Diseases of the spleen			1		1	9		8		1	2	5		1	1	9
Simple peritonitis (not puerperal)	5	9	5		1	331	23	313	35	6	153	171	6	18	6	354
Other diseases of the digestive system (cancer and tub. excepted)						1		1			1					1
Appendicitis and iliac abscess	5				1	133	4	123	12	2	71	54	3	6	3	137
Acute nephritis	13	6	8		1	134	8	121	18	3	57	57	9	11	8	142
Bright's disease	146	117	68	8	8	1031	35	837	187	42	169	569	131	150	47	1066
Other diseases of kidneys and adnexa	7	9	5		1	52	3	46	8	1	10	27	10	6	2	55
Urinary calculus						2		2				1	1			2
Diseases of the bladder	30	36	30	5	1	144	2	113	26	7	17	73	36	16	4	146
Diseases of the prostate	11	10	8			38		32	6		2	23	11		2	38
Non-venereal dis. of the male genital organs			1			2		2							2	2
Metritis						3		3				3				3
Uterine hemorrhage (not puerperal)						3		3				2			1	3
Uterine tumor (not cancerous)		1				10		10			4	5		1		10
Other diseases of the uterus		1				26		24	2		6	16		2	2	26
Ovarian cysts and other ovarian tumors			1			28	1	24	3	2	3	18		4	4	29
Other diseases of female genital organs					1	14		14			2	10		2		14
Accidents of pregnancy					1	66	3	64	3	2		66		1	2	69
Puerperal hemorrhage						24	3	25	2		1	23		3		27
Other accidents of labor						8		8			2	6				8
Puerperal septicemia					6	226	8	222	11	1	12	210		1	11	234
Puerperal albuminuria and convulsions						58		53	3	2	4	51		1	2	58
Puerperal phlegmasia alba dolens						2		2				2				2

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Other accidents of pregnancy, sudden death						4		4				4				4
Gangrene	11	15	14	3		65		47	15	3	10	28	6	18	3	65
Carbuncle	3	1	2			16	1	14	3		4	7	5		1	17
Phlegmon, acute abscess						16	1	15	1	1	6	10		1		17
Other diseases of the skin and adnexa		2	1			25		24	1		18	3	2	1	1	25
Diseases of the bones, non-tuberculous	1				1	14		14			11	2		1		14
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)	1					8	1	9			5	3	1			9
Other diseases of organs of locomotion						1		1							1	1
Congenital malformations (stillbirths excepted)						178	2	180			180					180
Congenital debility, icterus and sclerema						1160	15	1175			1175					1175
Other diseases peculiar to infancy						63	5	68			68					68
Neglect						4		4			4					4
Senile debility	59	270	687	212	35	1239	26	880	327	58	65	321	296	524	59	1265
Suicide by poisoning	2	2			2	112		97	7	8	31	62	5	4	10	112
Asphyxia						1		1			1					1
Hanging or strangulation	1	5				47	1	32	13	3	15	19	6	2	6	48
Drowning	1					15	1	10	3	3	4	9		2	1	16
Firearms						52		43	4	5	28	17	2		5	52
Cutting instruments	1	1				9		7	2		5	3	1			9
Crushing						1		1				1				1
Other methods						15		10	4	1	4	7	2	1	1	15
Fractures	6	14	24	3	4	131	5	107	20	9	46	42	12	25	11	136
Dislocations						1		1				1				1
Other accidental injuries	25	22	25	4	12	765	23	635	74	79	343	321	41	33	50	788
Burning by fire	3	3	4		2	157	8	153	5	7	117	27	4	11	6	165
Burning by corrosive substances						4		4			3	1				4
Sunstroke	7	9	7		3	82	8	62	22	6	20	38	9	16	7	90
Freezing			1		1	9	2	8	1	2	3	5	2		1	11
Electrical shock		1				32	1	29	2	2	18	13	1		1	33
Accidental drowning					8	101	11	91	7	14	84	14	4	1	9	112
Inanition	5	2	5	2	6	677	40	707	7	3	683	18	3	10	3	717
Inhalation of noxious gases (not suicidal)	2	1	1			31		28	2	1	14	6	4	4	3	31
Other acute poisoning	1			1	1	63	2	60	2	3	34	18	7	2	4	65
Other external violence					1	27		22		5	17	8	1		1	27
Homicide						40	7	37	3	7	20	20	1		6	47
Mob violence							1			1		1				1
Dropsy	38	13	27	2	2	182	12	150	32	12	32	91	23	36	12	194
Sudden death (not puerperal)	1	1	2			17	3	18	2		9	4	3	3	1	20
Causes not specified or ill defined	33	12	7		8	350	10	313	35	12	191	94	18	39	18	360

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Deaths in Indiana by Geographical Sections and by Counties, During the Year 1901.

STATE AND COUNTIES.	Population Based on Census, 1900.	Total Deaths Reported for the Year 1901.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.			Deaths from Important Causes.														
					Under 1 Year.	1 to 4, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrhœal Diseases, Under 5.	Cerebro-Spinal Meningitis.	Influenza.	Puerperal Septicæmia.	Cancer.	Violence.
State of Indiana	2,516,462	36,544	14.5	1,795	8,015	2,895	9,414	4,115	533	1,198	487	67	149	161	181	3,469	1,776	236	1,049	234	1,113	1,765
Northern Counties	839,835	10,947	13.0	509	2,405	766	3,106	1,084	138	329	169	23	41	32	36	891	521	68	301	69	383	565
Adams	22,232	298	13.4	12	72	24	69	31	7	15	3	....	1	....	1	20	15	3	5	1	15	15
Allen	77,270	1,051	13.6	35	193	62	297	106	15	38	22	2	5	1	2	77	28	3	20	4	41	69
Benton	13,123	152	11.5	1	37	12	32	24	1	1	2	1	....	2	1	13	9	2	.....	.....	3	7
Blackford	17,213	234	13.5	13	63	23	50	28	3	7	4	1	....	3	1	21	23	3	9	1	5	10
Carroll	19,953	201	10.0	10	39	15	62	24	4	9	8	....	1	1	....	20	12	.....	5	2	7	5
Cass	34,545	513	14.8	23	87	33	131	56	12	14	4	....	....	2	2	40	12	4	16	3	11	43
Dekalb	25,711	337	13.1	15	71	28	96	38	3	10	3	....	7	....	1	21	12	3	14	1	15	18
Elkhart	45,052	544	12.0	21	89	28	161	48	3	19	3	....	1	....	....	43	14	4	20	7	27	27
Fulton	17,453	207	11.8	11	46	10	70	19	1	7	4	....	1	....	....	20	11	1	9	3	9	4
Grant	54,693	813	14.8	39	177	56	211	95	8	38	4	3	3	1	3	77	49	6	12	4	19	48
Howard	28,575	389	13.6	22	80	29	100	49	3	10	1	....	....	1	....	26	17	2	8	2	24	22
Huntington	28,901	344	11.9	13	61	25	105	46	5	17	3	1	....	....	1	17	17	2	7	.....	15	8
Jasper	14,292	165	11.5	9	33	13	46	17	3	3	6	1	....	....	2	12	11	.....	6	3	2	5
Jay	26,818	364	13.5	21	89	39	99	42	5	11	3	1	1	7	....	29	17	1	9	2	12	16
Kosciusko	29,109	345	11.8	19	72	29	108	30	3	14	5	....	4	....	1	32	13	4	13	4	7	16
Lagrange	15,284	213	13.9	7	34	18	81	18	4	3	1	....	....	1	1	28	6	2	10	1	12	13
Lake	37,892	534	14.0	25	147	57	100	35	6	15	14	3	4	2	4	45	49	2	10	11	11	27
Laporte	38,386	510	13.2	30	112	34	167	36	8	5	9	1	1	....	1	28	19	4	5	2	20	25
Marshall	25,119	291	11.5	6	56	24	105	32	4	4	10	1	1	1	1	19	10	.....	11	1	10	11
Miami	28,344	394	13.9	14	71	25	110	37	5	16	7	2	2	2	....	38	15	6	15	2	10	30
Newton	10,448	133	12.7	4	38	13	31	6	1	1	6	2	....	1	....	15	16	4	2	1	4	5
Noble	23,533	300	12.7	20	57	14	108	30	5	6	3	....	....	....	2	21	4	.....	13	.....	12	18
Porter	19,175	241	12.5	3	44	17	92	11	3	3	9	....	1	2	1	25	13	.....	7	4	11	17

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Pulaski	14,033	155	11.0	7	38	16	38	14	2	5	3	....	....	....	1	17	11	.....	2	.....	5	4
Starke	10,431	152	14.5	5	44	7	44	10	.....	4	8	1	....	....	1	14	12	.....	4	.....	5	7
Steuben	15,219	173	11.3	3	25	3	71	10	1	2	.....	....	2	....	....	15	2	4	12	2	5	9
St. Joseph	58,881	814	13.8	65	252	51	181	83	8	21	12	3	3	....	5	62	56	4	20	4	23	33
Wabash	28,235	357	12.6	14	85	19	114	36	7	10	4	....	....	....	2	30	18	1	11	3	11	16
Wells	23,449	289	12.3	15	95	13	72	33	2	9	4	....	....	2	....	33	16	1	7	.....	12	10
White	19,138	218	11.3	16	57	15	73	17	3	5	2	....	1	3	2	17	9	.....	12	1	12	10
Whitley	17,228	216	12.5	11	41	14	82	23	3	7	2	....	2	....	....	15	5	2	7	.....	8	17
Central Counties	1,024,791	15,374	15.0	767	3,292	1,182	3,889	1,722	245	457	177	22	74	67	70	1,465	720	85	441	94	449	754
Bartholomew	24,594	386	15.6	22	85	37	111	43	7	9	6	....	2	8	1	43	25	4	5	3	5	11
Boone	26,321	332	12.6	15	67	30	95	54	7	9	6	....	1	....	4	28	18	1	10	.....	13	20
Brown	9,727	141	14.4	9	36	17	34	20	1	8	.....	....	2	....	4	16	8	3	1	1	1	3
Clay	34,285	435	12.6	17	106	46	80	58	5	15	5	2	....	3	....	52	21	3	13	2	5	25
Clinton	28,202	380	13.4	18	93	38	91	38	6	17	5	....	....	2	1	38	26	1	15	3	9	13
Decatur	19,518	339	17.3	7	61	28	124	30	5	14	.....	1	2	1	3	31	14	.....	12	1	11	17
Delaware	49,624	712	14.3	52	209	67	133	80	13	32	9	....	1	10	4	61	41	3	13	5	13	26
Fayette	13,495	220	16.3	6	40	24	60	22	1	5	1	....	3	1	....	43	18	3	2	.....	12	11
Fountain	21,446	315	14.6	9	67	30	85	30	6	8	6	1	1	....	....	35	18	3	23	5	2	11
Franklin	16,388	245	14.9	5	37	18	91	21	5	10	2	1	....	1	....	26	10	2	10	3	4	10
Hamilton	29,914	453	14.2	30	102	26	125	50	6	10	6	1	2	....	2	36	28	.....	17	5	17	15
Hancock	19,189	246	12.8	15	59	19	61	19	5	9	2	....	1	1	3	18	13	2	9	1	6	11
Hendricks	21,292	289	13.5	11	53	24	94	23	3	10	4	....	2	3	3	30	12	1	6	2	8	13
Henry	25,088	429	17.0	30	92	27	138	37	7	17	2	1	2	6	3	35	13	1	8	1	7	14
Johnson	20,223	295	14.5	13	48	13	92	39	4	9	2	....	1	2	1	27	16	.....	10	3	10	11
Madison	70,470	1,062	15.0	74	290	116	167	121	14	36	23	1	18	4	4	76	77	16	17	5	32	66
Marion	197,227	3,276	16.6	172	652	188	673	376	56	61	41	4	10	....	9	306	92	9	81	18	101	180
Monroe	20,873	295	14.1	10	70	31	77	33	3	11	2	3	1	1	3	32	21	3	12	2	9	19
Montgomery	29,388	407	13.8	21	74	35	138	43	8	6	.....	....	3	....	1	43	12	4	21	5	15	17
Morgan	20,457	278	13.5	8	55	18	99	36	5	11	1	....	....	....	4	33	16	1	15	.....	5	4
Owen	15,149	228	15.0	11	52	12	62	40	3	6	.....	....	1	1	1	27	12	1	7	.....	8	9
Parke	23,000	287	12.4	11	56	21	76	37	4	14	4	....	1	....	....	25	16	2	12	2	7	22
Putnam	21,478	307	14.2	25	68	21	95	38	2	9	1	....	....	1	....	33	10	.....	9	.....	13	20
Randolph	28,653	407	14.2	20	91	31	118	50	10	9	1	....	....	9	....	41	27	3	6	5	15	8
Rush	20,148	278	13.7	7	49	24	81	32	5	6	1	....	1	2	1	27	7	3	6	1	10	9
Shelby	26,491	362	13.6	15	74	23	100	50	4	15	5	1	....	1	....	24	22	1	11	2	13	12
Tippecanoe	38,659	576	14.8	28	97	39	180	63	7	13	5	2	1	1	4	49	24	1	13	2	21	29
Tipton	19,116	269	14.0	19	74	31	50	27	8	14	6	....	5	1	1	13	23	2	3	4	12	9
Union	6,748	76	11.2	1	10	1	36	9	.....	1	.....	....	....	....	....	7	3	.....	2	.....	.....	2

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Deaths in Indiana by Geographical Sections and by Counties, During the Year 1901.

STATE AND COUNTIES.	Population Based on Census, 1900.	Total Deaths Reported for the Year 1901.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.			Deaths from Important Causes.													
					Under 1 Year.	1 to 4, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrhœal Diseases, Under 5.	Cerebro-Spinal Meningitis.	Influenza.	Puerperal Septicæmia.	Cancer.	Violence.
Vermillion	15,252	247	16.1	11	69	17	55	37	4	4	2	1	....	....	3	28	10	2	19	2	6	17
Vigo	62,035	1,022	16.4	45	220	98	217	90	13	37	23	3	11	4	10	107	53	8	23	4	35	83
Warren	11,371	111	9.7	4	23	9	31	6	1	4	1	....	1	....	....	18	6	.....	3	2	3	8
Wayne	38,970	697	17.8	26	113	23	220	70	17	18	5	....	1	4	....	59	13	2	27	5	23	29
Southern Counties	651,836	10,223	15.6	519	2,318	947	2,419	1,309	150	412	141	22	34	62	75	1,113	535	83	307	71	231	446
Clark	31,835	546	17.1	20	111	31	142	59	14	25	6	....	....	....	2	64	15	8	10	.....	19	18
Crawford	13,476	221	16.3	7	52	22	59	38	1	9	1	2	1	4	....	30	7	4	8	.....	4	13
Daviess	29,914	461	15.4	27	124	47	83	59	4	30	4	3	1	3	5	51	26	9	11	3	12	23
Dearborn	22,194	353	15.9	12	63	22	134	41	6	7	2	....	2	....	2	47	12	2	12	3	15	19
Dubois	20,357	291	14.2	13	71	39	66	30	1	19	8	....	....	6	2	45	23	1	8	2	1	10
Floyd	30,118	508	16.8	22	92	30	132	74	9	15	26	2	1	....	....	37	13	....	12	3	9	26
Gibson	30,009	460	15.3	22	113	44	94	64	8	21	3	1	1	1	3	47	31	3	11	5	8	25
Greene	28,530	404	14.1	27	105	60	57	59	5	15	4	1	....	4	4	46	21	10	10	6	8	10
Harrison	21,702	307	14.1	12	65	25	78	45	3	12	4	1	4	11	....	35	10	2	13	2	7	12
Jackson	26,633	467	17.5	25	107	66	108	59	14	23	13	1	5	3	5	52	29	4	16	2	10	16
Jefferson	22,913	394	17.1	13	72	22	132	65	10	15	1	....	....	....	1	33	10	1	18	4	13	12
Jennings	15,757	241	15.2	7	43	20	81	29	3	8	.....	....	2	....	1	24	15	.....	7	.....	8	11
Knox	32,746	511	15.6	30	137	48	79	52	2	25	8	....	2	1	8	67	30	5	17	4	14	28
Lawrence	25,729	339	13.1	11	70	55	73	34	5	23	3	1	....	1	4	39	34	2	7	1	5	27
Martin	14,711	248	16.8	19	65	30	55	34	.....	12	5	....	1	1	6	25	13	1	10	2	4	4
Ohio	4,724	52	11.0	2	5	2	28	12	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	.....	3	2
Orange	16,854	254	15.0	8	45	25	64	38	3	13	1	....	1	1	4	23	12	.....	15	1	4	13
Perry	18,778	283	15.0	18	73	27	88	33	.....	10	6	1	2	....	2	36	17	2	14	2	7	6
Pike	20,486	377	18.4	28	111	34	72	53	9	20	3	1	....	3	3	54	18	2	10	3	10	11
Posey	22,333	449	20.1	20	104	50	100	43	6	14	5	1	5	3	8	68	35	9	13	3	11	18

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Ripley	19,881	275	13.8	9	60	13	102	29	7	10	.....	....	....	....	2	30	6	4	11	2	8	17
Scott	8,307	125	15.0	4	17	20	32	17	5	3	3	....	3	....	3	12	8	.....	7	.....	5	5
Spencer	22,407	322	14.3	18	80	34	58	50	4	12	3	2	2	4	4	31	17	2	7	4	7	5
Sullivan	26,005	439	16.8	26	112	54	75	57	5	9	8	2	....	13	3	37	27	3	13	6	10	14
Switzerland	11,840	162	13.6	10	36	6	60	23	3	3	2	....	....	....	....	15	12	2	3	1	10	3
Vanderburgh	71,769	1,096	15.2	83	247	68	199	150	9	22	8	....	1	....	1	80	54	3	20	10	42	72
Warrick	22,329	330	14.7	13	73	37	73	28	8	22	14	1	....	....	....	33	18	2	13	2	12	15
Washington	19,409	308	15.8	13	65	16	95	34	6	15	.....	2	....	3	2	51	22	1	9	.....	15	16

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Deaths in Indiana During the Year Ending December 31, 1901, Statistically Classified by the Bertillon System, with Annual Rates per 100,000 Population, Census 1900.

Classification Number.	CAUSES OF DEATH.	No. of Deaths	Death Rate per 100,000.
	All causes	36,544	1,452.1
	Stillbirths	1,795	71.3
	I. General Diseases.		
1	Typhoid fever (abdominal typhus)	1,198	47.6
2	Exanthematic typhus	.....	.....
3	Recurrent fever	.....	.....
4	Intermittent fever, malarial cachexia	187	7.4
4a	Malarial cachexia	10	.3
5	Smallpox	21	.8
6	Measles	161	6.3
7	Scarlet fever	149	5.9
8	Whooping cough	181	7.1
9	Diphtheria and croup	67	2.6
9a	Diphtheria	487	19.3
10	Influenza	1,049	41.6
11	Miliary fever	.....	.....
12	Asiatic cholera	.....	.....
13	Cholera nostras	33	1.3
14	Dysentery	263	10.4
14a	Epidemic dysentery	.....	.....
15	Plague	.....	.....
16	Yellow fever	.....	.....
17	Leprosy	.....	.....
18	Erysipelas	84	3.3
19	Other epidemic diseases	5	.1
20	Pyemia and septicemia	248	9.8
21	Glanders	.....	.....
22	Anthrax	1	.0
23	Rabies	3	.1
24	Actinomycosis, trichinosis, etc	.....	.....
25	Pellagra	.....	.....
26	Tuberculosis of larynx	54	2.1
27	Tuberculosis of lungs	4,115	163.5
28	Tuberculosis of meninges	153	6.0
29	Abdominal tuberculosis	187	7.4
30	Potts disease	11	.4
31	Cold abscess	1	.0
32	White swelling	2	.0
33	Tuberculosis of other organs	60	2.3
34	General tuberculosis	79	3.1
35	Scrofula	24	.9
36	Syphilis	49	1.9
37	Gonorrhea (adults)	.....	.....
38	Gonorrhoal affections of infants	.....	.....
39	Cancer and other malignant tumors of the mouth	39	1.5
40	Cancer and other malignant tumors of the stomach, liver	420	16.6
41	Peritoneum, intestines, rectum	82	3.2
42	Female genital organs	167	6.6
43	Of the breast	114	4.5
44	Of the skin	90	3.5
45	Of other organs and unspecified	201	7.9
46	Other tumors, except of female genital organs	52	2.0
47	Acute articular rheumatism	103	4.0
48	Chronic rheumatism and gout	81	3.2
49	Scurvy	1	.0
50	Diabetes	204	8.1
51	Exophthalmic goiter	24	.9
52	Addison's disease	12	.4
53	Leukemia	24	.9
54	Anemia, chlorosis	124	4.9
55	Other general diseases	25	.9
56	Alcoholism, acute and chronic	67	2.6
57	Lead poisonings	1	.0
58	Other chronic poisonings of occupation	.....	.....
59	Other chronic poisonings	9	.3

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Deaths in Indiana Classified by the Bertillon System—Continued.

Classification Number.	CAUSES OF DEATH.	No. of Deaths	Death Rate per 100,000.
	II. Diseases of the Nervous System and of the Organs of Sense.		
60	Encephalitis	189	7.5
61	Simple meningitis	553	21.9
61a	Epidemic cerebro spinal meningitis	236	9.3
62	Progressive locomotor ataxia	32	1.2
63	Other diseases of the spinal cord	128	5.0
64	Congestion and hemorrhage of brain	1,264	50.2
65	Softening of the brain	129	5.1
66	Paralysis, cause unspecified	986	39.1
67	General paralysis	56	2.2
68	Other forms of insanity	78	3.0
69	Epilepsy	129	5.1
70	Convulsions (not puerperal)	38	1.5
71	Convulsions of infants	406	16.1
72	Tetanus	63	2.5
73	Chorea	14	.5
74	Other nervous diseases	183	7.2
75	Diseases of the eyes		
76	Diseases of the ears	10	.3
	III. Diseases of the Circulatory System.		
77	Pericarditis	76	3.0
78	Acute endocarditis	125	4.9
79	Organic heart disease	1,754	69.7
80	Angina pectoris	161	6.3
81	Diseases of the arteries, atheroma, aneurism, etc.	86	3.4
82	Embolism and thrombosis	31	1.2
83	Diseases of the veins (varices, hemorrhoids, phlebitis)	11	.4
84	Diseases of the lymphatics, lymphangitis, etc.	4	.1
85	Hemorrhage	79	3.1
86	Other diseases of the circulatory system	1	.0
	IV. Diseases of the Respiratory System.		
87	Diseases of the nasal fossæ	2	.0
88	Diseases of the larynx	61	2.4
89	Diseases of the thyroid body	3	.1
90	Acute bronchitis	377	14.9
91	Chronic bronchitis	185	7.3
92	Broncho pneumonia	480	19.0
93	Pneumonia	2,989	118.7
94	Pleurisy	41	1.6
95	Congestion of lungs, pulmonary apoplexy	354	14 9
96	Gangrene of the lung	7	.2
97	Asthma	127	5.0
98	Pulmonary emphysema	14	.5
99	Other diseases of the respiratory system (phthisis excepted)	156	6.1
	V. Diseases of the Digestive System.		
100	Diseases of the mouth and adnexa	36	1.4
101	Diseases of the pharynx	41	1.6
102	Diseases of the esophagus	4	.1
103	Ulcer of the stomach	56	2.2
104	Other diseases of the stomach (cancer excepted)	648	25.7
105	Diarrhea and enteritis (under four years of age)	1,776	70.5
105a	Diarrhea, chronic	34	1.3
106	Diarrhea and enteritis (four years and over)	395	15.6
107	Intestinal parasites	6	.2
108	Hernia, intestinal obstructions	203	8.0
109	Other diseases of the intestines	362	14.3
110	Acute yellow atrophy of the liver	6	.2
111	Hydatid tumor of the liver		
112	Cirrhosis of the liver	160	6.3
113	Biliary Calculi	27	1.0
114	Other diseases of the liver	320	12.7
115	Diseases of the spleen	9	.3
116	Simple peritonitis (not puerperal)	354	14.0

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Deaths in Indiana Classified by the Bertillon System—Continued.

Classification Number.	CAUSES OF DEATH.	No. of Deaths	Death Rate per 100,000.
117	Other diseases of the digestive system (cancer and tuberculosis excepted)	1	.0
118	Appendicitis and Iliac abscess	137	5.4
	VI. Diseases of the Genito-Urinary System.		
119	Acute nephritis	142	5.6
120	Brights disease	1,066	42.3
121	Other diseases of the kidneys and adnexa	55	2.1
122	Urinary calculus	2	.0
123	Diseases of the bladder	146	5.8
124	Diseases of the urethra, urinary abscess, etc		
125	Diseases of the prostate	38	1.5
126	Non-venereal diseases of the male genital organs	2	.0
127	Metritis	3	.1
128	Uterine hemorrhage (not puerperal)	3	.1
129	Uterine tumor (not cancerous)	10	.3
130	Other diseases of the uterus	26	1.0
131	Ovarian cysts and other ovarian tumors	29	1.1
132	Other diseases of the female genital organs	14	.5
133	Diseases of the breast (not puerperal, not cancerous)		
	VII. Puerperal Diseases.		
134	Accidents of pregnancy	69	2.7
135	Puerperal hemorrhage	27	1.0
136	Other accidents of labor	8	.3
137	Puerperal septicemia	234	9.2
138	Puerperal albuminuria and convulsions	58	2.3
139	Puerperal phlegmasia alba dolens	2	.0
140	Other accidents of pregnancy, sudden death	4	.1
141	Puerperal diseases of the breast		
	VIII. Diseases of the Skin and Cellular Tissue.		
142	Gangrene	65	2.5
143	Carbuncle	17	.6
144	Phlegmon, acute abscess	17	.6
145	Other diseases of the skin and adnexa	25	.9
	IX. Diseases of the Locomotor System.		
146	Diseases of the bones, non-tuberculous	14	.5
147	Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)	9	.3
148	Amputation		
149	Other diseases of the organs of locomotion	1	.0
	X. Malformations.		
150	Congenital malformations (stillbirths not included)	180	7.1
	XI. Diseases of Infancy.		
151	Congenital debility, icterus and sclerema	1,175	46.6
152	Other diseases peculiar to infancy	68	2.7
153	Neglect	4	.1
	XII. Diseases of Old Age.		
154	Senile debility	1,265	50.2
	XIII. External Causes.		
155	Suicide by poisoning	112	4.4
156	Asphyxia	1	.0
157	Hanging or strangulation	48	1.9
158	Drowning	16	.6
159	Firearms	52	2.0
160	Cutting instruments	9	.3
161	Precipitation from height		

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Deaths in Indiana Classified by the Bertillon System—Continued.

Classification Number.	CAUSES OF DEATH.	No. of Deaths	Death Rate per 100,000.
162	Crushing	1	.0
163	Other methods	15	.5
164	Fractures	136	5.4
165	Dislocations	1	.0
166	Other accidental injuries	788	31.3
167	Burning by fire	165	6.5
168	Burning by corrosive substances	4	.1
169	Sunstroke	90	3.5
170	Freezing	11	.4
171	Electrical shock	33	1.3
172	Accidental drowning	112	4.4
173	Inanition	717	28.4
174	Inhalation of noxious gases (not suicidal)	31	1.2
175	Other acute poisoning	65	2.5
176	Other external violence	27	1.0
176a	Homicide	47	1.8
176b	Mob violence	1	.0
	XIV. Causes Ill-Defined.		
177	Dropsy	194	7.7
178	Sudden death (not puerperal)	20	.7
179	Causes not specified or ill-defined	360	14.3

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TABLE 2.

Deaths in Indiana, by Months, Counties, Ages, Sex, Color, Nationality and Conjugal Condition.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Adams	Total	29	20	42	23	28	22	18	33	22	28	15	18
	Males	11	11	23	15	11	8	6	18	13	18	3	14
	Females	18	9	19	8	17	14	12	15	9	10	12	4
Allen	Total	103	96	93	98	100	79	66	68	87	86	82	93
	Males	49	50	47	52	53	51	35	30	48	40	41	54
	Females	54	46	46	46	47	28	31	38	39	46	41	39
Bartholomew	Total	30	43	33	28	35	24	31	38	33	37	22	32
	Males	16	24	12	15	20	13	14	22	14	14	9	17
	Females	14	19	21	13	15	11	17	16	19	23	13	15
Benton	Total	14	13	18	11	9	10	15	10	18	11	9	14
	Males	3	9	8	6	4	3	11	5	8	7	5	5
	Females	11	4	10	5	5	7	4	5	10	4	4	9
Blackford	Total	19	25	24	20	14	11	28	23	18	15	20	17
	Males	9	6	16	6	5	7	14	8	8	11	13	9
	Females	10	19	8	14	9	4	14	15	10	4	7	8
Boone	Total	31	34	30	36	21	25	25	25	18	29	33	25
	Males	16	18	15	20	8	14	11	8	12	12	15	10
	Females	15	16	15	16	13	11	14	17	6	17	18	15
Brown	Total	14	22	16	11	10	9	9	14	13	12	10	1
	Males	6	12	9	8	5	6	3	7	5	7	8	1
	Females	8	10	7	3	5	3	6	7	8	5	2	.....
Carroll	Total	22	24	18	16	20	11	16	12	17	13	14	18
	Males	8	10	12	7	10	7	5	7	11	10	5	6
	Females	14	14	6	9	10	4	11	5	6	3	9	12

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Cass	Total	50	43	55	52	43	43	41	33	31	56	27	39
	Males	28	23	25	29	21	22	20	18	15	33	14	19
	Females	22	20	30	23	22	21	21	15	16	23	13	20
Clark	Total	57	66	50	49	37	40	54	41	38	43	32	39
	Males	25	29	25	24	23	16	23	19	23	26	18	16
	Females	32	37	25	25	14	24	31	22	15	17	14	23
Clay	Total	55	37	34	32	34	31	30	39	36	38	31	38
	Males	35	20	19	18	13	14	16	18	13	19	16	18
	Females	20	17	15	14	21	17	14	21	23	19	15	20
Clinton	Total	33	44	41	26	28	19	42	39	31	30	19	28
	Males	18	28	21	12	8	14	21	18	20	15	13	16
	Females	15	16	20	14	20	5	21	21	11	15	6	12
Crawford	Total	20	29	22	20	18	11	21	16	13	15	13	23
	Males	11	13	9	9	11	7	8	8	9	8	4	12
	Females	9	16	13	11	7	4	13	8	4	7	9	11
Daviess	Total	40	58	54	41	20	19	50	40	47	29	31	32
	Males	20	27	25	23	8	11	25	19	26	14	16	15
	Females	20	31	29	18	12	8	25	21	21	15	15	17
Dearborn	Total	35	37	37	25	24	19	38	29	25	25	22	37
	Males	23	22	17	15	14	9	18	15	15	13	14	18
	Females	12	15	20	10	10	10	20	14	10	12	8	19
Decatur	Total	32	33	23	25	25	19	36	26	30	33	24	33
	Males	18	17	10	12	12	11	23	9	12	17	11	19
	Females	14	16	13	13	13	8	13	17	18	16	13	14
Dekalb	Total	27	42	36	22	35	27	17	37	27	25	20	22
	Males	15	20	17	10	18	13	6	20	14	11	11	13
	Females	12	22	19	12	17	14	11	17	13	14	9	9
Delaware	Total	73	75	53	59	48	40	65	64	65	56	55	59
	Males	32	35	36	23	30	20	31	41	31	25	30	30
	Females	41	40	17	36	18	20	34	23	34	31	25	29
Dubois	Total	25	25	34	27	12	16	34	27	24	20	25	22
	Males	11	9	17	17	2	3	17	13	10	9	13	14
	Females	14	16	17	10	10	13	17	14	14	11	12	8
Elkhart	Total	55	49	52	44	43	53	36	44	55	31	44	38
	Males	24	29	31	23	20	29	13	24	34	17	24	14
	Females	31	20	21	21	23	24	23	20	21	14	20	24

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TABLE 2—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Fayette	Total	22	23	23	30	21	7	16	18	9	18	17	16
	Males	13	9	14	21	10	.....	9	9	3	14	8	10
	Females	9	14	9	9	11	7	7	9	6	4	9	6
Floyd	Total	44	45	48	30	34	28	53	45	32	48	48	53
	Males	23	22	19	14	16	16	21	26	19	29	22	26
	Females	21	23	29	16	18	12	32	19	13	19	26	27
Fountain	Total	41	35	37	20	14	16	29	27	30	18	23	25
	Males	24	16	19	9	7	11	15	15	15	8	11	13
	Females	17	19	18	11	7	5	14	12	15	10	12	12
Franklin	Total	32	24	20	22	19	14	17	22	17	21	16	21
	Males	11	16	13	11	7	7	6	8	9	11	7	11
	Females	21	8	7	11	12	7	11	14	8	10	9	10
Fulton	Total	26	30	23	13	10	12	17	12	17	12	17	18
	Males	14	11	10	6	3	9	6	5	9	8	8	11
	Females	12	19	13	7	7	3	11	7	8	4	9	7
Gibson	Total	37	46	36	32	34	31	44	44	42	43	26	45
	Males	19	25	20	16	17	18	20	25	28	21	15	20
	Females	18	21	16	16	17	13	24	19	14	22	11	25
Grant	Total	91	70	66	79	58	49	77	101	63	58	53	48
	Males	47	38	48	35	40	32	40	57	34	32	33	29
	Females	44	32	18	44	18	17	37	44	29	26	20	19
Greene	Total	26	21	32	40	29	25	45	35	36	45	46	24
	Males	9	8	16	19	14	14	25	10	16	26	27	9
	Females	17	13	16	21	15	11	20	25	20	19	19	15
Hamilton	Total	58	34	45	38	30	27	40	40	35	23	25	30
	Males	28	23	23	15	10	11	20	18	18	13	7	13
	Females	30	11	22	23	20	16	20	22	17	10	18	17

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Hancock	Total	22	22	31	23	19	7	19	28	22	15	22	16
	Males	11	14	12	13	10	4	12	15	10	9	12	8
	Females	11	8	19	10	9	3	7	13	12	6	10	8
Harrison	Total	46	32	31	21	22	20	39	18	15	19	17	27
	Males	27	13	17	12	12	13	16	7	6	6	11	10
	Females	19	19	14	9	10	7	23	11	9	13	6	17
Hendricks	Total	31	19	26	27	24	22	22	25	27	24	20	23
	Males	100	13	15	14	15	9	9	12	16	10	12	11
	Females	21	6	11	13	9	13	13	13	11	14	8	11
Henry	Total	47	42	40	37	30	16	41	32	42	36	27	39
	Males	24	20	14	25	15	6	23	16	24	20	18	16
	Females	23	22	26	12	15	10	18	16	18	16	9	23
Howard	Total	37	42	25	40	23	33	28	34	32	33	28	24
	Males	23	19	15	19	8	19	12	19	19	19	12	20
	Females	14	23	10	21	15	14	16	15	13	14	16	14
Huntington	Total	35	28	28	34	24	28	38	28	23	29	26	25
	Males	21	13	14	21	18	17	22	16	12	17	12	12
	Females	14	13	14	13	6	11	16	12	11	12	14	13
Jackson	Total	47	42	39	50	40	26	45	38	34	29	31	46
	Males	22	18	11	26	16	12	24	22	22	11	10	31
	Females	25	24	28	24	24	14	21	16	12	18	21	15
Jasper	Total	16	16	16	16	12	15	9	16	17	8	7	17
	Males	9	7	10	9	5	5	3	4	10	2	5	10
	Females	7	9	6	7	7	10	6	12	7	6	2	7
Jay	Total	22	37	45	39	32	20	22	29	32	27	28	31
	Males	10	17	18	19	20	8	13	24	20	19	11	14
	Females	12	20	27	20	12	12	9	5	12	8	17	17
Jefferson	Total	39	42	38	24	32	34	50	28	29	24	26	28
	Males	16	19	18	12	18	21	21	14	15	12	14	10
	Females	23	23	20	12	14	13	29	14	14	12	12	18
Jennings	Total	21	16	15	21	19	23	27	23	19	17	19	21
	Males	10	8	7	13	10	10	15	11	9	12	15	8
	Females	11	8	8	8	9	13	12	12	10	5	4	13
Johnson	Total	28	36	26	26	15	23	26	27	32	23	16	17
	Males	12	17	10	13	6	11	8	9	18	7	6	10
	Females	16	19	16	13	9	12	18	18	14	16	10	7

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TABLE 2—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Fayette	Total	22	23	23	30	21	7	16	18	9	18	17	16
	Males	13	9	14	21	10	.....	9	9	3	14	8	10
	Females	9	14	9	9	11	7	7	9	6	4	9	6
Floyd	Total	44	45	48	30	34	28	53	45	32	48	48	53
	Males	23	22	19	14	16	16	21	26	19	29	22	26
	Females	21	23	29	16	18	12	32	19	13	19	26	27
Fountain	Total	41	35	37	20	14	16	29	27	30	18	23	25
	Males	24	16	19	9	7	11	15	15	15	8	11	13
	Females	17	19	18	11	7	5	14	12	15	10	12	12
Franklin	Total	32	24	20	22	19	14	17	22	17	21	16	21
	Males	11	16	13	11	7	7	6	8	9	11	7	11
	Females	21	8	7	11	12	7	11	14	8	10	9	10
Fulton	Total	26	30	23	13	10	12	17	12	17	12	17	18
	Males	14	11	10	6	3	9	6	5	9	8	8	11
	Females	12	19	13	7	7	3	11	7	8	4	9	7
Gibson	Total	37	46	36	32	34	31	44	44	42	43	26	45
	Males	19	25	20	16	17	18	20	25	28	21	15	20
	Females	18	21	16	16	17	13	24	19	14	22	11	25
Grant	Total	91	70	66	79	58	49	77	101	63	58	53	48
	Males	47	38	48	35	40	32	40	57	34	32	33	29
	Females	44	32	18	44	18	17	37	44	29	26	20	19
Greene	Total	26	21	32	40	29	25	45	35	36	45	46	24
	Males	9	8	16	19	14	14	25	10	16	26	27	9
	Females	17	13	16	21	15	11	20	25	20	19	19	15
Hamilton	Total	58	34	45	38	30	27	40	40	35	23	25	30
	Males	28	23	23	15	10	11	20	18	18	13	7	13
	Females	30	11	22	23	20	16	20	22	17	10	18	17

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Hancock	Total	22	22	31	23	19	7	19	28	22	15	22	16
	Males	11	14	12	13	10	4	12	15	10	9	12	8
	Females	11	8	19	10	9	3	7	13	12	6	10	8
Harrison	Total	46	32	31	21	22	20	39	18	15	19	17	27
	Males	27	13	17	12	12	13	16	7	6	6	11	10
	Females	19	19	14	9	10	7	23	11	9	13	6	17
Hendricks	Total	31	19	26	27	24	22	22	25	27	24	20	22
	Males	100	13	15	14	15	9	9	12	16	10	12	11
	Females	21	6	11	13	9	13	13	13	11	14	8	11
Henry	Total	47	42	40	37	30	16	41	32	42	36	27	39
	Males	24	20	14	25	15	6	23	16	24	20	18	16
	Females	23	22	26	12	15	10	18	16	18	16	9	23
Howard	Total	37	42	25	40	23	33	28	34	32	33	28	34
	Males	23	19	15	19	8	19	12	19	19	19	12	20
	Females	14	23	10	21	15	14	16	15	13	14	16	14
Huntington	Total	35	28	28	34	24	28	38	28	28	29	26	25
	Males	21	13	14	21	18	17	22	16	12	17	12	12
	Females	14	13	14	13	6	11	16	12	11	12	14	13
Jackson	Total	47	42	39	50	40	26	45	38	34	29	31	46
	Males	22	18	11	26	16	12	24	22	22	11	10	31
	Females	25	24	28	24	24	14	21	16	12	18	21	15
Jasper	Total	16	16	16	16	12	15	9	16	17	8	7	17
	Males	9	7	10	9	5	5	3	4	10	2	5	10
	Females	7	9	6	7	7	10	6	12	7	6	2	7
Jay	Total	22	37	45	39	32	20	22	29	32	27	28	31
	Males	10	17	18	19	20	8	13	24	20	19	11	14
	Females	12	20	27	20	12	12	9	5	12	8	17	17
Jefferson	Total	39	42	38	24	32	34	50	28	29	24	26	28
	Males	16	19	18	12	18	21	21	14	15	12	14	10
	Females	23	23	20	12	14	13	29	14	14	12	12	18
Jennings	Total	21	16	15	21	19	23	27	23	19	17	19	21
	Males	10	8	7	13	10	10	15	11	9	12	15	8
	Females	11	8	8	8	9	13	12	12	10	5	4	13
Johnson	Total	28	36	26	26	15	23	26	27	32	28	16	17
	Males	12	17	10	13	6	11	8	9	18	7	6	10
	Females	16	19	16	13	9	12	18	18	14	16	10	7

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TABLE 2—Continued.

COUNTIES.	SEX.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Knox	Total	57	61	55	35	38	30	54	42	42	37	26	34
	Males	29	34	23	20	26	18	28	14	23	13	11	14
	Females	28	27	32	15	12	12	26	28	19	24	15	20
Kosciusko	Total	29	29	41	33	26	32	27	30	32	21	22	23
	Males	12	18	25	22	13	17	19	21	15	10	10	11
	Females	17	11	16	11	13	15	8	9	17	11	12	12
Lagrange	Total	30	21	25	19	10	11	16	12	20	15	18	16
	Males	15	12	12	10	7	7	13	4	13	6	10	9
	Females	15	9	13	9	3	4	3	8	7	9	8	7
Lake	Total	35	49	46	45	33	37	50	59	41	43	51	45
	Males	17	28	25	22	21	20	26	35	22	22	29	28
	Females	18	21	21	23	12	17	24	24	19	21	22	17
Laporte	Total	66	36	50	41	49	19	52	35	41	41	33	47
	Males	29	14	21	26	28	13	31	15	27	21	16	34
	Females	37	22	29	15	21	6	21	20	14	20	17	13
Lawrence	Total	37	33	25	24	28	18	37	27	29	35	23	23
	Males	17	22	13	13	15	6	18	12	17	26	14	14
	Females	20	11	12	11	13	12	19	15	12	9	9	9
Madison	Total	100	84	101	96	97	76	107	102	88	69	64	78
	Males	53	44	53	52	56	46	60	56	53	33	28	39
	Females	47	40	48	44	41	30	47	46	35	36	36	39
Marion	Total	362	284	277	268	231	224	373	265	243	254	236	259
	Males	189	149	123	147	122	120	196	127	145	132	133	123
	Females	173	135	154	121	109	104	177	138	98	122	103	136
Marshall	Total	32	29	28	22	31	12	19	17	26	23	23	27
	Males	16	14	16	16	17	7	10	10	13	7	16	18
	Females	16	15	12	6	14	5	9	7	15	16	7	9

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Martin	Total	30	27	26	14	14	14	24	22	24	20	14	19
	Males	15	11	11	7	9	8	10	8	12	9	10	11
	Females	15	16	15	7	5	6	14	14	12	11	4	8
Miami	Total	34	36	38	38	26	31	30	33	35	29	29	35
	Males	20	23	15	21	18	17	13	15	23	18	14	20
	Females	14	13	23	17	8	14	17	18	12	11	15	15
Monroe	Total	26	30	21	24	23	20	32	24	29	23	22	21
	Males	11	14	8	15	11	8	13	13	14	9	12	10
	Females	15	16	13	9	12	12	19	11	15	14	10	11
Montgomery	Total	41	47	47	35	30	18	27	43	30	28	32	29
	Males	24	19	26	17	13	9	17	24	17	13	19	12
	Females	17	28	21	18	17	9	10	19	13	15	13	17
Morgan	Total	24	34	24	24	22	24	22	26	20	20	20	18
	Males	7	19	11	14	14	16	12	15	12	13	8	11
	Females	17	15	13	10	8	8	10	11	8	7	12	7
Newton	Total	16	9	18	10	10	10	15	8	10	10	10	7
	Males	6	3	10	4	4	4	8	5	4	3	5	4
	Females	10	6	8	6	6	6	7	3	6	7	5	3
Noble	Total	34	29	31	28	22	14	21	31	17	24	19	30
	Males	15	17	19	15	12	9	12	14	7	15	10	14
	Females	19	12	12	13	10	5	9	17	10	9	9	16
Ohio	Total	6	5	4	7	2	.....	8	6	3	3	2	6
	Males	2	1	4	5	.....	.....	4	1	1	1	1	2
	Females	4	4	.....	2	2	.....	4	5	2	2	1	4
Orange	Total	23	32	16	22	19	19	28	28	13	19	12	23
	Males	13	13	8	13	5	13	13	14	4	6	8	11
	Females	10	19	8	9	14	6	15	14	9	13	4	12
Owen	Total	16	33	26	19	17	13	17	18	15	17	20	17
	Males	3	16	16	7	7	10	8	7	10	12	10	6
	Females	13	17	10	12	10	3	9	11	5	5	10	11
Parke	Total	27	27	26	23	15	19	27	19	26	26	22	30
	Males	14	9	16	11	7	8	17	10	12	14	14	17
	Females	13	18	10	12	8	11	10	9	14	12	8	13
Perry	Total	23	32	33	25	18	24	23	21	23	22	14	25
	Males	15	17	14	14	3	13	7	11	13	12	8	8
	Females	8	15	19	11	15	11	16	10	10	10	6	17

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TABLE 2—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Pike	Total	40	51	27	34	23	15	42	20	25	33	33	34
	Males	24	28	10	20	11	6	21	12	10	15	18	21
	Females	16	23	17	14	12	9	21	8	15	18	15	13
Porter	Total	25	22	20	25	21	6	20	19	17	20	20	26
	Males	15	8	12	15	6	2	10	8	8	11	12	16
	Females	10	14	8	10	15	4	10	11	9	9	8	10
Posey	Total	47	51	53	33	24	25	42	38	26	34	38	38
	Males	24	22	26	24	14	18	23	17	13	14	21	22
	Females	23	29	27	9	10	7	19	21	13	20	17	16
Pulaski	Total	11	9	15	17	7	11	10	12	18	12	17	16
	Males	5	5	9	7	5	8	3	7	9	3	10	11
	Females	6	4	6	10	2	3	7	5	9	9	7	5
Putnam	Total	27	44	27	22	27	27	38	19	19	21	17	19
	Males	15	20	17	13	12	14	16	10	6	14	12	8
	Females	12	24	10	9	15	13	22	9	13	7	5	11
Randolph	Total	30	48	33	29	45	24	31	37	40	39	25	26
	Males	11	27	16	14	26	15	13	20	18	21	13	13
	Females	19	21	17	15	19	9	18	17	22	18	12	13
Ripley	Total	30	34	36	30	14	18	19	19	25	16	16	18
	Males	12	20	18	23	8	8	11	10	11	6	8	9
	Females	18	14	18	7	6	10	8	9	14	10	8	9
Rush	Total	25	31	36	25	29	14	16	19	21	20	23	19
	Males	11	17	16	10	14	8	7	13	10	8	11	10
	Females	14	14	20	15	15	6	9	6	11	12	12	9
Scott	Total	12	9	11	11	10	11	15	9	14	9	6	8
	Males	10	4	6	3	2	3	5	5	8	6	3	3
	Females	2	5	5	8	8	8	10	4	6	4	3	5

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Shelby	Total	31	36	37	33	16	24	31	33	38	31	27	25
	Males	16	21	23	12	5	10	20	15	16	17	21	14
	Females	15	15	14	21	11	14	11	18	22	14	6	11
Spencer	Total	34	30	30	25	29	32	25	15	23	25	26	28
	Males	15	21	14	13	15	16	10	7	13	10	10	14
	Females	19	9	16	12	14	16	15	8	10	15	16	14
Starke	Total	16	14	10	6	14	10	13	18	18	9	16	8
	Males	8	8	7	1	7	5	7	9	11	6	7	4
	Females	8	6	3	5	7	5	6	9	7	3	9	4
Steuben	Total	26	22	17	23	17	6	10	10	9	11	9	13
	Males	12	10	5	11	9	5	6	6	5	4	7	7
	Females	14	12	12	12	8	1	4	4	4	7	2	6
St. Joseph	Total	76	84	68	66	60	48	77	68	66	75	59	67
	Males	43	43	37	37	27	18	39	32	30	49	38	31
	Females	33	41	31	29	33	30	38	36	36	26	21	36
Sullivan	Total	32	40	45	35	28	28	39	48	39	39	33	33
	Males	20	20	25	15	12	12	18	21	20	23	13	17
	Females	12	20	20	20	16	16	21	27	19	16	20	16
Switzerland	Total	13	24	15	12	14	9	15	12	16	12	11	9
	Males	6	11	7	6	5	3	10	7	9	6	5	5
	Females	7	13	8	6	9	6	5	5	7	6	6	4
Tippecanoe	Total	66	49	67	39	43	42	46	37	57	36	48	46
	Males	38	30	33	23	24	24	30	20	35	17	19	26
	Females	28	19	34	16	19	18	16	17	22	19	29	20
Tipton	Total	33	18	25	25	13	17	22	32	26	23	15	20
	Males	20	8	13	13	8	10	13	19	15	12	6	10
	Females	13	10	12	12	5	7	9	13	11	11	9	10
Union	Total	11	12	7	7	5	2	5	6	7	5	6	3
	Males	7	7	1	4	4	1	2	1	2	2	3	1
	Females	4	5	6	3	1	1	3	5	5	3	3	2
Vanderburgh	Total	114	104	92	92	60	93	136	93	82	69	75	86
	Males	57	45	45	53	30	45	72	45	42	40	51	47
	Females	57	59	47	39	30	48	64	48	40	29	24	39
Vermillion	Total	32	24	28	28	24	7	12	19	17	17	18	21
	Males	17	11	12	16	14	4	8	12	8	11	7	11
	Females	15	13	16	12	10	3	4	7	9	6	11	10

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TABLE 2—Continued.

COUNTIES.	SEX.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Vigo	Total	119	80	80	84	69	74	102	85	103	71	75	80
	Males	55	35	46	41	35	44	58	53	57	35	35	47
	Females	64	45	34	43	34	30	44	32	46	36	40	33
Wabash	Total	36	28	36	28	16	27	27	35	30	38	28	28
	Males	19	13	14	13	7	12	14	18	15	26	15	11
	Females	17	15	22	15	9	15	13	17	15	13	13	17
Warren	Total	17	8	18	9	3	9	6	13	7	5	7	9
	Males	7	7	8	4	3	5	4	6	6	3	4	7
	Females	10	1	10	5	.....	4	2	7	1	2	3	2
Warrick	Total	37	23	27	24	15	26	54	27	30	22	22	23
	Males	19	10	19	18	7	9	21	14	14	7	12	14
	Females	18	13	8	6	8	17	33	13	16	15	10	9
Washington	Total	21	31	29	27	24	18	37	25	23	16	25	32
	Males	9	12	11	12	10	11	18	12	10	7	16	16
	Females	12	19	18	15	14	7	19	13	13	9	9	16
Wayne	Total	53	81	73	56	50	48	44	57	61	62	55	57
	Males	29	49	32	24	32	26	23	30	31	35	29	27
	Females	24	32	41	32	18	22	21	27	30	27	26	30
Wells	Total	22	30	31	30	23	13	26	29	25	14	21	25
	Males	9	15	15	18	11	8	12	13	12	3	11	11
	Females	13	15	16	12	12	5	14	16	13	11	10	14
White	Total	28	20	17	18	14	13	13	18	14	18	20	25
	Males	18	14	5	8	5	8	5	10	8	7	9	11
	Females	10	6	12	10	9	5	8	8	6	11	11	14

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Whitley	Total	23	22	20	24	14	15	14	24	18	14	11	17
	Males	13	11	13	9	5	7	7	13	8	11	6	8
	Females	10	11	7	15	9	8	7	11	10	3	5	9
	Males	1,847	1,807	1,721	1,637	1,354	1,265	1,701	1,565	1,590	1,454	1,377	1,490
	Females	1,820	1,754	1,722	1,459	1,303	1,116	1,671	1,527	1,386	1,343	1,223	1,412
Grand total		3,667	3,561	3,443	3,096	2,657	2,381	3,372	3,092	2,976	2,797	2,600	2,902

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TABLE 2—Continued.

Deaths in Indiana, by Months, Counties, Ages, Sex, Color, Nationality and Conjugal Condition.

COUNTIES.	Sex.	0.	1.	2.	3.	4.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
Adams	Total	72	12	6	2	4	10	5	8	16	11	13	8	12	18	5	13	14	23
	Males	39	7	3	1	2	6	2	3	6	4	5	7	4	8	4	6	7	12
	Females	33	5	3	1	2	4	3	5	10	7	8	1	8	10	1	7	7	11
Allen	Total	193	24	18	15	5	29	26	45	58	48	42	38	37	47	41	44	44	53
	Males	108	14	10	7	3	16	8	20	32	25	23	18	17	26	24	28	25	29
	Females	85	10	8	8	2	13	18	25	26	23	19	20	20	21	17	16	19	24
Bartholomew	Total	85	23	9	5	.....	15	6	13	17	7	10	14	8	14	8	18	23	15
	Males	47	11	4	2	.....	7	1	6	7	3	4	7	3	6	3	11	13	10
	Females	38	12	5	3	.....	8	5	7	10	4	6	7	5	8	5	7	10	5
Benton	Total	37	5	3	2	2	5	4	3	6	9	5	4	3	8	6	6	12	7
	Males	17	3	1	1	1	3	2	2	3	3	2	1	1	4	4	3	5	5
	Females	20	2	2	1	1	2	2	1	3	6	3	3	2	4	2	3	7	2
Blackford	Total	63	11	6	5	1	7	5	15	8	9	5	5	10	9	11	5	9	9
	Males	27	5	2	3	.....	6	.....	7	5	2	3	2	6	6	8	2	5	5
	Females	36	6	4	2	1	1	5	8	3	7	2	3	4	3	3	3	4	4
Boone	Total	67	14	8	3	5	6	6	10	15	16	15	9	12	12	10	13	16	16
	Males	30	8	3	1	3	2	5	6	5	10	6	3	7	5	6	3	9	11
	Females	37	6	5	2	2	4	1	4	10	6	9	6	5	7	4	10	7	5
Brown	Total	36	11	2	2	2	5	2	7	5	3	4	2	2	5	5	6	8	8
	Males	20	3	1	1	.....	4	2	4	.....	2	2	1	1	3	1	3	7	5
	Females	16	8	1	1	2	1	.....	3	5	1	2	1	1	2	4	3	1	3
Carroll	Total	39	10	1	1	3	9	5	4	11	12	7	5	3	4	3	15	7	13
	Males	29	6	1	.....	1	6	.....	1	8	4	2	1	1	3	.....	5	1	7
	Females	10	4	.....	1	2	3	5	3	3	8	5	4	2	1	3	10	6	6

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Cass	Total	87	15	11	3	4	15	9	11	26	24	19	23	32	26	29	23	25	31
	Males	48	9	5	2	2	7	4	5	12	16	8	8	17	16	15	14	10	15
	Females	39	6	6	1	2	8	5	6	14	8	11	15	15	10	14	9	15	16
Clark	Total	111	16	9	3	3	24	12	27	15	26	15	25	16	17	24	28	33	38
	Males	67	8	4	2	1	12	8	13	7	16	5	10	6	7	11	16	11	16
	Females	44	8	5	1	2	12	4	14	8	10	10	15	10	10	13	12	22	22
Clay	Total	106	25	11	8	2	15	9	18	21	19	20	23	9	9	29	19	12	24
	Males	59	7	6	3	1	4	7	7	7	6	11	11	4	6	19	13	5	12
	Females	47	18	5	5	1	11	2	11	14	13	9	12	5	3	10	6	7	12
Clinton	Total	93	18	9	2	9	5	6	10	16	15	14	14	8	15	17	14	24	19
	Males	56	11	4	1	6	4	2	7	5	3	4	6	3	7	9	9	12	12
	Females	37	7	5	1	3	1	4	3	11	12	10	8	5	8	8	5	12	7
Crawford	Total	52	8	6	6	2	2	5	9	8	10	9	5	12	5	5	7	11	17
	Males	24	4	2	2	1	.....	1	3	4	6	5	3	6	1	3	5	3	5
	Females	27	4	4	4	1	2	4	6	4	4	4	2	6	4	2	2	8	12
Daviess	Total	124	26	9	7	5	19	8	20	24	16	18	12	20	13	14	23	20	16
	Males	78	17	4	2	1	8	5	8	12	10	11	3	3	3	2	16	9	6
	Females	46	9	5	5	4	11	3	12	12	6	7	9	17	10	12	7	11	10
Dearborn	Total	63	13	3	4	2	2	6	9	21	9	12	11	14	9	10	18	13	25
	Males	34	9	1	2	.....	2	4	4	12	5	7	1	7	7	4	9	8	11
	Females	29	4	2	2	2	.....	2	5	9	4	5	10	7	2	6	9	5	14
Decatur	Total	61	14	11	2	1	5	6	12	8	14	4	10	6	12	13	14	22	16
	Males	38	10	3	2	1	3	4	5	3	7	.....	5	3	7	7	5	13	6
	Females	23	4	8	.....	.....	2	2	7	5	7	4	5	3	5	6	9	9	10
Dekalb	Total	71	13	5	5	5	6	9	14	14	8	18	6	10	8	11	21	17	27
	Males	46	5	4	1	4	1	5	5	5	2	9	2	5	6	4	8	7	15
	Females	25	8	1	4	1	5	4	9	9	6	9	4	5	2	7	13	10	12
Delaware	Total	209	25	20	12	10	17	13	32	37	26	31	23	23	21	18	24	38	36
	Males	121	18	11	5	6	8	8	7	10	8	12	13	13	9	5	14	19	18
	Females	88	7	9	7	4	9	5	25	27	18	19	10	10	12	13	10	19	18
Dubois	Total	71	21	11	6	1	13	9	14	4	9	13	11	12	9	5	8	8	12
	Males	29	13	2	3	1	4	2	7	.....	5	4	6	3	6	4	6	4	7
	Females	42	8	9	3	.....	9	7	7	4	4	9	5	9	3	1	2	4	5
Elkhart	Total	89	17	2	7	2	10	6	14	15	19	26	22	20	18	45	34	37	35
	Males	53	12	1	3	1	7	4	6	6	10	7	9	8	8	28	17	16	18
	Females	36	5	1	4	1	3	2	8	9	9	19	13	12	10	17	17	21	17

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TABLE 2—Continued.

COUNTIES.	SEX.	0.	1.	2.	3.	4.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
Fayette	Total	40	11	6	5	2	7	3	3	8	16	9	4	4	8	11	12	11	11
	Males	28	5	4	1	2	5	1	2	3	13	3	3	4	4	4	5	5	5
	Females	12	6	2	4	.....	2	2	1	5	3	6	1	.....	4	7	7	6	6
Floyd	Total	92	12	7	7	4	32	10	19	29	24	24	21	10	19	15	26	25	36
	Males	53	7	3	3	.....	19	4	10	11	13	10	6	5	12	8	13	9	18
	Females	39	5	4	4	4	13	6	9	18	11	14	15	5	7	7	13	16	18
Fountain	Total	67	18	7	3	2	15	8	11	10	8	16	10	10	8	9	12	16	17
	Males	42	10	5	1	1	4	4	2	4	4	9	3	6	5	7	4	4	13
	Females	25	8	2	2	1	11	4	9	6	4	7	7	4	3	2	8	12	4
Franklin	Total	37	11	3	.....	4	5	5	6	13	14	13	9	4	3	11	6	10	15
	Males	19	5	2	.....	2	4	3	1	7	5	4	4	1	.....	9	5	7	5
	Females	18	6	1	.....	2	1	2	5	6	9	9	5	3	3	2	1	3	10
Fulton	Total	46	7	1	1	1	3	5	3	14	3	5	5	10	8	8	3	14	16
	Males	26	4	.....	1	1	2	3	.....	4	1	3	2	4	2	2	2	10	6
	Females	20	3	1	.....	.....	1	2	3	10	2	2	3	6	6	6	1	4	10
Gibson	Total	113	28	4	7	5	8	7	22	21	18	18	18	17	15	17	26	22	20
	Males	61	16	2	3	3	4	5	9	8	8	7	11	15	9	10	14	7	9
	Females	52	12	2	4	2	4	2	13	13	10	11	7	2	6	7	12	15	11
Grant	Total	177	35	13	7	1	16	20	19	42	42	29	30	27	24	23	50	47	51
	Males	99	16	6	4	.....	6	9	12	18	18	13	16	14	12	16	33	35	36
	Females	78	19	7	3	1	10	11	7	24	24	16	14	13	12	7	17	12	15
Greene	Total	105	24	18	13	5	12	11	22	25	11	13	12	13	11	13	24	15	9
	Males	50	10	11	8	1	3	3	9	12	2	2	7	4	7	8	12	9	4
	Females	55	14	7	5	4	9	8	13	13	9	11	5	9	4	5	12	6	5
Hamilton	Total	102	15	6	3	2	7	4	15	14	19	15	14	12	13	13	26	20	26
	Males	55	8	2	2	2	5	2	9	6	7	5	5	2	7	7	7	10	7
	Females	47	7	4	1	.....	2	2	6	8	12	10	9	10	6	6	19	10	19

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Hancock	Total	59	8	6	2	3	11	4	6	8	5	12	6	17	13	6	7	12	7
	Males	38	4	3	2	1	3	3	3	5	2	5	2	4	7	4	4	7	5
	Females	21	4	3	.....	2	8	1	3	3	3	7	4	13	6	2	3	5	2
Harrison	Total	65	13	7	2	3	9	7	15	18	19	16	12	11	10	7	8	7	16
	Males	38	6	4	1	2	5	4	6	8	7	8	4	3	4	4	2	6	7
	Females	27	7	3	1	1	4	3	9	10	12	8	8	8	6	3	6	1	9
Hendricks	Total	53	13	6	3	2	7	5	18	8	11	7	6	7	6	10	14	19	15
	Males	32	6	5	2	2	6	4	10	4	4	1	5	4	1	6	4	7	10
	Females	21	7	1	1	.....	1	1	8	4	7	6	1	3	5	4	10	12	5
Henry	Total	92	13	3	9	2	7	9	17	18	16	13	16	12	11	16	19	18	23
	Males	53	4	1	4	1	4	6	11	7	4	6	5	4	5	11	8	12	15
	Females	39	9	2	5	1	3	3	6	11	12	7	11	8	6	5	11	6	8
Howard	Total	80	17	7	1	4	9	11	15	19	9	15	16	14	19	15	18	20	26
	Males	46	10	5	1	3	3	7	7	9	3	8	9	8	7	9	9	10	11
	Females	34	7	2	.....	1	6	4	8	10	6	7	7	6	12	6	9	10	15
Huntington	Total	61	14	8	3	.....	11	9	7	14	17	10	10	16	11	14	13	21	21
	Males	34	11	4	1	.....	8	3	4	5	7	3	5	10	6	7	10	12	12
	Females	27	3	4	2	.....	3	6	3	9	10	7	5	6	5	7	3	9	9
Jackson	Total	107	35	13	10	8	14	8	22	24	20	17	12	11	10	15	15	18	29
	Males	61	17	5	6	5	4	3	9	7	4	6	6	8	4	9	10	11	16
	Females	46	18	8	4	3	10	5	13	17	16	11	6	3	6	6	5	7	13
Jasper	Total	33	5	5	2	1	5	4	10	5	9	5	8	12	7	3	2	3	11
	Males	16	1	2	.....	1	2	4	4	2	2	3	5	5	2	1	1	1	9
	Females	17	4	3	2	.....	3	.....	6	3	7	2	3	7	5	2	1	2	2
Jay	Total	89	21	11	4	3	9	7	12	12	12	15	11	6	9	10	18	16	15
	Males	61	14	4	2	1	6	5	5	4	3	6	2	5	3	8	12	6	7
	Females	28	7	7	2	2	3	2	7	8	9	9	9	1	6	2	6	10	8
Jefferson	Total	72	10	6	4	2	5	5	12	32	20	11	15	7	12	18	14	17	24
	Males	31	6	3	2	1	2	3	6	11	10	3	7	3	7	7	8	10	11
	Females	41	4	3	2	1	3	2	6	21	10	8	8	4	5	11	6	7	13
Jennings	Total	43	9	6	4	1	4	3	3	3	11	11	10	8	6	10	10	18	23
	Males	15	3	2	2	1	3	2	2	.....	3	7	4	5	4	8	6	9	13
	Females	28	6	4	2	.....	1	1	1	3	8	4	6	3	2	2	4	9	10
Johnson	Total	48	6	6	1	.....	6	3	10	15	13	15	13	15	15	11	7	19	15
	Males	26	2	3	.....	.....	2	2	4	6	6	4	3	7	3	5	4	9	8
	Females	22	4	3	1	.....	4	1	6	9	7	11	10	8	12	6	3	10	7

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TABLE 2—Continued.

COUNTIES.	SEX.	0.	1.	2.	3.	4.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
Knox	Total	137	23	11	7	7	22	16	27	27	20	14	20	25	17	18	21	20	20
	Males	81	10	3	4	3	9	7	9	13	8	8	10	15	9	10	9	12	8
	Females	56	13	8	3	4	13	9	18	14	12	6	10	10	8	8	12	8	12
Kosciusko	Total	72	18	9	.....	2	8	7	9	14	6	12	13	13	12	10	15	17	25
	Males	39	7	6	.....	1	4	5	6	5	4	4	8	7	6	9	9	9	15
	Females	33	11	3	.....	1	4	2	3	9	2	8	5	6	6	1	6	8	10
Lagrange	Total	34	10	6	1	1	6	3	5	6	5	1	6	4	10	3	10	21	19
	Males	19	5	2	.....	1	4	1	1	2	2	1	2	1	5	2	7	13	10
	Females	15	5	4	1	.....	2	2	4	4	3	.....	4	3	5	1	3	8	9
Lake	Total	147	32	10	9	6	22	12	16	18	29	22	15	18	18	19	25	16	17
	Males	87	17	6	3	4	14	7	9	7	15	9	7	14	10	11	14	10	11
	Females	60	15	4	6	2	8	5	7	11	14	13	8	4	8	8	11	6	6
Laporte	Total	112	17	9	3	5	11	8	12	16	12	20	11	14	18	17	24	34	30
	Males	66	5	4	1	1	9	5	7	7	5	12	9	11	8	10	12	18	16
	Females	46	12	5	2	4	2	3	5	9	7	8	2	3	10	7	12	16	14
Lawrence	Total	70	33	14	4	4	8	11	14	25	16	7	9	15	12	6	9	9	17
	Males	43	19	4	1	3	3	4	8	13	11	2	5	7	9	4	2	7	8
	Females	27	14	10	3	1	5	7	6	12	5	5	4	8	3	2	7	2	9
Madison	Total	290	58	29	15	14	44	16	25	60	57	46	41	50	38	41	32	39	48
	Males	156	36	13	9	6	26	9	10	28	29	23	15	28	19	24	22	27	19
	Females	134	22	16	6	8	18	7	15	32	28	23	26	22	19	17	10	12	29
Marion	Total	652	84	43	39	22	63	58	111	165	171	171	138	169	160	175	202	180	183
	Males	344	45	29	23	13	32	32	51	74	79	84	80	83	101	94	117	92	92
	Females	308	39	14	16	9	31	26	60	91	92	87	58	86	59	81	85	88	91
Marshall	Total	56	14	4	4	2	11	5	7	15	7	3	5	7	3	18	12	13	20
	Males	36	9	3	2	1	8	1	6	7	4	3	3	2	.....	10	8	7	9
	Females	20	5	1	2	1	3	4	1	8	3	.....	2	5	3	8	4	6	11

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Martin	Total	65	18	9	1	2	15	2	7	11	11	9	9	9	5	3	7	10	12
	Males	36	9	4	.....	1	8	1	2	5	4	4	2	3	1	1	5	7	8
	Females	29	9	5	1	1	7	1	5	6	7	5	7	6	4	2	2	3	4
Miami	Total	71	15	4	1	5	17	10	11	23	14	18	19	16	11	17	19	14	26
	Males	48	6	2	.....	5	8	2	7	11	7	12	12	5	7	10	11	3	13
	Females	23	9	2	1	.....	9	8	4	11	7	6	7	11	4	7	8	11	13
Monroe	Total	70	17	9	3	2	5	11	8	16	12	8	6	13	11	6	9	12	21
	Males	42	8	3	.....	.....	1	3	4	6	4	3	.....	8	5	4	4	5	12
	Females	28	9	6	3	2	4	8	4	10	8	5	6	5	6	2	5	7	9
Montgomery	Total	74	14	13	6	2	3	2	11	22	13	11	11	17	11	14	20	25	26
	Males	46	7	6	3	1	2	.....	7	10	7	5	4	7	3	7	11	15	13
	Females	28	7	7	3	1	1	2	4	12	6	6	7	10	8	7	9	10	13
Morgan	Total	55	12	4	2	.....	4	5	7	11	10	7	12	7	10	11	9	13	22
	Males	33	4	2	2	.....	1	.....	3	6	6	6	7	2	5	8	7	8	9
	Females	22	8	2	.....	.....	3	5	4	5	4	1	5	5	5	3	2	5	13
Newton	Total	38	6	3	3	1	4	5	6	3	3	5	5	3	3	5	3	6	9
	Males	20	2	.....	1	1	2	4	5	.....	1	2	3	1	1	3	2	2	3
	Females	18	4	3	2	.....	2	1	1	3	2	3	2	2	2	2	1	4	6
Noble	Total	57	10	1	1	2	9	3	10	14	9	5	12	9	7	13	10	20	22
	Males	30	6	.....	.....	1	3	2	6	10	8	2	7	1	5	6	5	11	12
	Females	27	4	1	1	1	6	1	4	4	1	3	5	8	2	27	5	9	10
Ohio	Total	5	1	.....	.....	1	.....	1	2	1	3	4	2	.....	1	.....	1	2	5
	Males	1	1	.....	.....	.....	.....	.....	2	.....	.....	1	1	.....	.....	.....	.....	1	1
	Females	4	.....	.....	.....	1	.....	1	.....	1	3	3	1	.....	1	.....	1	1	4
Orange	Total	45	8	7	4	6	11	4	16	13	10	15	6	6	5	8	5	21	16
	Males	23	5	3	3	3	4	1	7	4	.....	8	4	3	3	1	3	15	7
	Females	22	3	4	1	3	7	3	9	9	10	7	2	3	2	7	2	6	9
Owen	Total	52	5	3	1	3	3	3	10	9	7	12	6	10	6	8	13	15	13
	Males	33	2	2	1	1	2	3	5	5	3	5	1	4	2	3	7	5	6
	Females	19	3	1	.....	2	1	.....	5	4	4	7	5	6	4	5	6	10	7
Parke	Total	56	14	4	2	1	9	3	13	18	5	13	11	13	7	12	11	19	11
	Males	33	6	2	2	.....	5	2	4	7	3	7	2	11	2	7	6	6	9
	Females	23	8	2	.....	1	4	1	9	11	2	6	9	2	5	5	5	13	2
Perry	Total	73	14	6	2	5	8	8	8	8	10	6	9	2	5	9	10	12	21
	Males	35	9	2	1	2	2	5	2	4	2	2	4	2	2	5	6	5	10
	Females	38	5	4	1	3	6	3	6	4	8	4	5	.....	3	4	4	7	11

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TABLE 2—Continued.

COUNTIES.	Sex.	0.	1.	2.	3.	4.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
Pike	Total	111	19	7	6	2	12	7	16	17	16	13	14	16	8	15	10	16	18
	Males	62	12	2	3	.....	7	3	7	9	4	6	7	5	5	7	2	8	12
	Females	49	7	5	3	2	5	4	9	8	12	7	7	9	3	8	8	8	6
Porter	Total	44	8	4	3	2	3	5	9	11	10	7	7	5	7	10	3	11	24
	Males	22	3	2	.....	1	.....	3	6	6	5	4	2	2	.....	4	3	6	14
	Females	22	5	2	3	1	3	2	3	5	5	3	5	3	7	6	.....	5	10
Posey	Total	104	28	12	5	5	14	11	22	23	14	13	18	15	10	21	16	18	32
	Males	64	17	5	4	3	8	7	8	11	3	5	8	9	2	15	8	11	16
	Females	40	11	7	1	2	6	4	14	12	11	8	10	6	8	6	8	7	16
Pulaski	Total	38	6	1	7	2	5	4	8	5	6	4	4	5	1	6	7	8	12
	Males	20	5	.....	4	.....	4	3	4	1	2	.....	3	2	.....	5	4	3	8
	Females	18	1	1	3	2	1	1	4	4	4	4	1	3	1	1	3	5	4
Putnam	Total	68	14	3	3	1	4	3	14	18	13	5	9	8	7	10	14	18	22
	Males	36	5	1	2	.....	2	2	7	11	7	3	.....	3	5	6	3	11	11
	Females	32	9	2	1	1	2	1	7	7	6	2	9	5	2	4	11	7	11
Randolph	Total	91	17	5	5	4	10	9	13	11	14	13	12	12	18	11	23	21	26
	Males	53	9	1	3	3	4	5	8	2	4	5	3	4	12	5	14	10	14
	Females	38	8	4	2	1	6	4	5	9	10	8	9	8	6	6	9	11	12
Ripley	Total	60	8	4	1	.....	5	5	6	15	12	7	8	5	7	8	6	18	19
	Males	37	3	.....	1	.....	1	3	1	8	5	3	3	3	3	4	3	12	12
	Females	23	5	4	.....	.....	4	2	5	7	7	4	5	2	4	4	3	4	7
Rush	Total	49	13	4	4	3	1	3	12	15	9	13	8	16	18	8	15	6	18
	Males	24	7	1	3	1	.....	.....	5	8	4	6	2	11	8	3	6	3	7
	Females	25	6	3	1	2	1	3	7	7	5	7	6	5	10	5	9	3	11
Scott	Total	17	15	2	1	2	3	5	3	10	4	5	2	4	3	4	8	5	7
	Males	10	7	.....	.....	1	1	1	1	4	3	2	1	2	2	3	2	2	4
	Females	7	8	2	1	1	2	4	2	6	1	3	1	2	1	1	6	3	3

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Shelby	Total	74	16	3	2	2	9	7	13	22	14	16	11	12	16	15	14	16	34
	Males	45	10	1	1	1	4	3	4	11	4	9	4	9	11	7	10	10	14
	Females	29	6	2	1	1	5	4	9	11	10	7	7	3	5	8	4	6	20
Spencer	Total	80	16	11	4	3	9	5	12	17	21	13	14	13	6	9	15	16	17
	Males	43	10	4	3	3	2	2	4	9	8	8	8	6	4	3	6	7	10
	Females	37	6	7	1	.....	7	3	8	8	13	5	6	7	2	6	9	9	7
Starke	Total	44	5	2	.....	.....	6	8	5	6	2	3	4	3	5	6	6	3	16
	Males	26	3	1	.....	.....	3	5	2	5	.....	.....	1	.....	4	3	1	2	12
	Females	18	2	1	.....	.....	3	3	3	1	2	3	3	3	1	3	5	1	4
Steuben	Total	25	1	1	1	.....	3	6	4	4	6	7	6	5	7	7	9	10	12
	Males	16	1	.....	1	.....	2	4	3	1	2	1	3	3	2	4	6	3	8
	Females	9	.....	1	.....	.....	1	2	1	3	4	6	3	2	5	3	3	7	4
St. Joseph	Total	252	24	11	12	4	14	9	23	37	28	27	34	35	31	24	32	36	41
	Males	129	10	4	9	1	4	6	10	18	15	13	15	19	19	14	24	19	16
	Females	123	14	7	3	3	10	3	13	19	13	14	19	16	12	10	8	17	25
Sullivan	Total	112	27	11	12	4	11	11	14	25	18	14	17	12	19	16	21	20	15
	Males	56	13	7	6	3	4	4	3	8	9	9	6	6	9	8	14	13	8
	Females	56	14	4	6	1	7	7	11	17	9	5	11	6	10	8	7	7	7
Switzerland	Total	36	4	.....	2	.....	2	1	2	7	5	7	3	7	6	8	4	8	8
	Males	17	3	.....	1	.....	.....	1	1	2	1	2	2	4	4	4	3	3	6
	Females	19	1	.....	1	.....	2	.....	1	5	4	5	1	3	2	4	1	5	2
Tippecanoe	Total	97	22	14	2	1	16	7	19	19	19	21	15	18	32	26	38	30	52
	Males	57	11	10	.....	1	8	4	10	6	9	10	8	8	17	11	25	17	27
	Females	40	11	4	2	.....	8	3	9	13	10	11	7	10	15	15	13	13	25
Tipton	Total	74	16	8	5	2	8	2	11	11	15	7	12	4	5	11	15	13	16
	Males	45	11	5	5	2	6	2	5	3	5	2	7	2	3	3	8	7	7
	Females	29	5	3	.....	.....	2	.....	6	8	10	5	5	2	2	8	7	6	9
Union	Total	10	1	.....	.....	.....	1	.....	2	2	3	1	2	2	2	2	6	6	7
	Males	5	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	1	1	2	4	1	1
	Females	5	1	.....	.....	.....	.....	.....	2	1	3	1	1	1	1	.....	2	5	6
Vanderburgh	Total	247	41	12	10	5	17	20	32	57	69	56	58	57	65	35	51	65	41
	Males	149	27	6	6	3	9	10	14	24	28	26	28	29	28	24	32	42	19
	Females	98	14	6	4	2	8	10	18	33	41	30	30	28	37	11	19	23	22
Vermillion	Total	69	9	6	1	1	4	4	13	9	10	11	7	6	8	14	7	13	16
	Males	45	5	4	1	.....	3	2	4	1	3	5	3	4	3	9	1	5	10
	Females	24	4	2	.....	1	1	2	9	8	7	6	4	2	5	5	6	8	6

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TABLE 2—Continued.

COUNTIES.	SEX.	0.	1.	2.	3.	4.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
Vigo	Total	220	50	25	13	10	29	16	38	58	58	55	37	38	37	29	37	55	60
	Males	126	25	18	8	6	10	7	14	32	28	27	24	26	23	18	16	32	38
	Females	94	25	7	5	4	19	9	24	26	30	28	13	12	14	16	21	23	22
Wabash	Total	85	8	7	3	1	7	7	12	12	13	11	13	13	13	12	11	15	27
	Males	51	5	3	2	.....	4	3	2	3	3	3	3	6	6	7	8	8	12
	Females	34	3	4	1	1	3	4	10	9	10	8	10	7	7	5	3	7	15
Warren	Total	23	6	.....	2	1	.....	4	5	1	5	2	6	5	4	1	9	6	6
	Males	11	4	.....	2	1	.....	3	2	1	2	.....	1	2	3	1	8	4	3
	Females	12	2	.....	.....	.....	.....	1	3	.....	3	2	5	3	1	.....	1	2	3
Warrick	Total	73	22	7	4	4	11	11	14	22	14	9	9	7	6	15	11	18	15
	Males	30	9	4	1	.....	7	6	6	10	8	4	4	6	5	6	6	12	7
	Females	43	13	3	3	4	4	5	8	12	6	5	5	1	1	10	5	6	8
Washington	Total	65	10	2	2	2	5	7	16	18	10	9	6	10	10	13	10	18	19
	Males	33	7	2	.....	1	2	2	11	6	5	3	2	3	4	5	2	8	9
	Females	32	3	.....	2	1	3	5	5	12	5	6	4	7	6	8	8	10	10
Wayne	Total	113	9	7	7	.....	11	11	19	37	25	28	29	30	30	38	47	36	41
	Males	61	6	4	6	.....	4	6	7	17	8	15	18	15	16	20	24	22	24
	Females	52	3	3	1	.....	7	5	12	20	17	13	11	15	14	18	23	14	17
Wells	Total	95	7	.....	3	3	6	2	7	13	16	8	5	9	11	6	12	14	6
	Males	55	2	.....	1	.....	2	2	.....	3	9	1	.....	4	4	3	4	10	4
	Females	40	5	.....	2	3	4	.....	7	10	7	7	5	5	7	3	8	4	2
White	Total	57	7	6	1	1	7	4	6	14	1	5	2	9	7	4	8	6	18
	Males	28	4	3	.....	.....	2	3	2	8	1	2	.....	5	2	2	4	3	11
	Females	29	3	3	1	1	5	1	4	6	.....	3	2	4	5	2	4	3	7

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Whitley	Total	41	7	6	1	.....	5	3	7	7	4	7	8	2	7	12	9	8	22
	Males	19	5	3	1	.....	5	1	4	2	1	1	4	1	4	5	6	6	12
	Females	22	2	3	.....	.....	.....	2	3	5	3	6	4	1	3	7	3	2	10
	Males	4,481	802	335	220	144	466	351	567	745	661	624	588	656	667	745	890	963	1,099
	Females	3,534	703	353	201	137	476	344	707	969	850	771	686	659	626	628	734	847	1,017
Grand total	....	8,015	1,505	688	421	281	942	695	1,274	1,714	1,511	1,395	1,274	1,315	1,293	1,373	1,624	1,810	2,116

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TABLE 2—Continued.

Deaths in Indiana, by Months, Counties, Ages, Sex, Color, Nationality and Conjugal Condition.

COUNTIES.	Sex.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Adams	Total	10	15	20	1	.....	298	.....	250	44	4	147	97	20	26	8	298
	Males	5	8	11	1	.....	151	.....	127	23	1	77	51	20	.....	3	151
	Females	5	7	9	.....	.....	147	.....	123	21	3	70	46	.....	26	5	147
Allen	Total	79	77	72	13	3	1,041	10	799	231	21	471	321	78	136	45	1,051
	Males	41	33	35	6	2	541	9	409	134	7	261	185	78	.....	26	550
	Females	38	44	37	7	1	500	1	390	97	14	210	136	.....	136	19	501
Bartholomew	Total	28	28	34	6	.....	381	5	352	29	5	189	126	16	45	10	386
	Males	15	13	13	4	.....	187	3	173	15	2	98	72	16	.....	4	190
	Females	13	15	21	2	.....	194	2	179	14	3	91	54	.....	45	6	196
Benton	Total	8	5	7	1	4	149	3	129	18	5	72	52	4	8	16	152
	Males	4	1	4	.....	4	72	2	59	11	4	38	22	4	.....	10	74
	Females	4	4	3	1	.....	77	1	70	7	1	34	30	.....	8	6	78
Blackford	Total	8	14	18	1	.....	234	.....	222	10	2	128	64	12	23	7	234
	Males	4	5	8	1	.....	112	.....	104	6	2	60	35	12	.....	5	112
	Females	4	9	10	.....	.....	122	.....	118	4	.....	68	29	.....	23	2	122
Boone	Total	27	24	19	8	1	329	3	322	7	3	147	120	13	36	16	332
	Males	9	11	11	4	1	157	2	154	3	2	78	59	13	.....	9	159
	Females	18	13	8	4	.....	172	1	168	4	1	69	61	.....	36	7	173
Brown	Total	10	7	7	.....	2	141	.....	134	.....	7	71	48	9	8	5	141
	Males	8	5	3	.....	1	77	.....	72	.....	5	35	30	9	.....	3	77
	Females	2	2	4	.....	1	64	.....	62	.....	2	36	18	.....	8	2	64
Carroll	Total	13	15	20	.....	1	200	1	185	9	7	90	62	13	31	5	201
	Males	6	8	7	.....	1	97	1	87	5	6	56	27	13	.....	2	98
	Females	7	7	13	.....	.....	103	.....	98	4	1	34	35	.....	31	3	103

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Cass	Total	34	29	29	4	4	510	3	376	52	85	201	157	31	65	59	513
	Males	14	16	20	2	2	266	1	195	27	45	110	89	31	.....	37	267
	Females	20	13	9	2	2	244	2	181	25	40	91	68	.....	65	22	246
Clark	Total	35	33	30	4	2	453	93	462	53	31	251	170	30	79	16	546
	Males	19	16	11	1	.....	225	42	226	18	23	141	89	30	.....	7	287
	Females	16	17	19	3	2	228	51	236	35	8	110	81	.....	79	9	279
Clay	Total	14	18	18	3	3	431	4	388	36	11	228	128	17	41	21	435
	Males	8	10	8	2	3	217	2	192	20	7	121	68	17	.....	13	219
	Females	6	8	10	1	.....	214	2	196	16	4	107	60	.....	41	8	216
Clinton	Total	27	19	23	3	.....	379	1	370	7	3	181	144	22	28	5	380
	Males	15	12	15	1	.....	203	1	196	6	2	106	71	22	.....	5	204
	Females	12	7	8	2	.....	176	.....	174	1	1	75	73	.....	28	.....	176
Crawford	Total	12	11	14	.....	5	220	1	206	7	8	99	86	13	17	6	221
	Males	8	7	13	.....	2	109	.....	100	4	5	46	49	13	.....	1	109
	Females	4	4	1	.....	3	111	1	106	3	3	53	37	.....	17	5	112
Daviess	Total	19	20	27	1	.....	454	7	435	20	6	254	128	18	52	9	461
	Males	13	7	11	.....	.....	226	3	213	12	4	150	55	18	.....	6	229
	Females	6	13	16	1	.....	228	4	222	8	2	104	73	.....	52	3	232
Dearborn	Total	28	29	43	4	5	350	3	263	74	16	143	121	30	46	13	333
	Males	12	19	30	1	4	191	2	141	41	11	83	71	30	.....	9	193
	Females	16	10	13	3	1	159	1	122	33	5	60	50	.....	46	4	160
Decatur	Total	27	34	36	10	1	333	6	311	22	6	141	118	24	54	2	339
	Males	15	15	17	1	1	168	3	158	8	5	84	62	24	.....	1	171
	Females	12	19	19	9	.....	165	3	153	14	1	57	56	.....	54	1	168
Dekalb	Total	25	22	17	4	1	337	....	310	21	6	149	122	19	41	6	337
	Males	14	10	9	1	.....	168	.....	155	10	3	85	62	19	.....	2	168
	Females	11	12	8	3	1	169	.....	155	11	3	64	60	.....	41	4	169
Delaware	Total	27	37	30	2	1	691	21	659	46	7	374	228	39	50	21	712
	Males	17	22	18	1	1	356	8	333	29	2	211	107	39	.....	7	364
	Females	10	15	12	1	.....	335	13	326	17	5	163	121	.....	50	14	348
Dubois	Total	17	18	17	.....	2	291	.....	230	55	6	158	85	20	22	6	291
	Males	9	10	8	.....	2	135	.....	103	28	4	70	43	20	.....	2	135
	Females	8	8	9	.....	.....	156	.....	127	27	2	88	42	.....	22	4	156
Elkhart	Total	37	41	46	1	1	543	1	498	34	12	186	240	38	63	17	544
	Males	21	22	23	1	1	282	.....	257	20	5	110	124	38	.....	10	282
	Females	16	19	23	.....	.....	261	1	241	14	7	76	116	.....	63	7	262

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TABLE 2—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Fayette	Total	13	13	19	2	2	215	5	202	13	5	102	61	15	24	18	220
	Males	5	6	12	.....	.....	118	2	111	5	4	65	32	15	.....	8	120
	Females	8	7	7	2	2	97	3	91	8	1	37	29	.....	24	10	100
Floyd	Total	36	27	24	7	2	452	56	426	73	9	238	169	23	70	8	508
	Males	17	14	11	6	1	223	30	214	34	5	131	96	23	.....	3	253
	Females	19	13	13	1	1	229	26	212	39	4	107	73	.....	70	5	255
Fountain	Total	19	15	26	3	5	312	3	293	15	7	158	100	18	33	6	315
	Males	12	7	13	1	2	162	1	152	7	4	88	53	18	.....	4	163
	Females	7	8	13	2	3	150	2	141	8	3	70	47	.....	33	2	152
Franklin	Total	20	23	28	3	2	244	1	191	45	9	100	79	14	42	10	245
	Males	7	10	12	3	2	116	1	96	18	3	50	48	14	.....	5	117
	Females	13	13	16	.....	.....	128	.....	95	27	6	50	31	.....	42	5	128
Fulton	Total	20	15	17	1	1	207	.....	197	9	1	78	81	14	23	11	207
	Males	11	8	8	.....	.....	100	.....	94	5	1	45	37	14	.....	4	100
	Females	9	7	9	1	1	107	.....	103	4	.....	33	44	.....	23	7	107
Gibson	Total	30	12	24	3	5	439	21	425	22	13	233	147	31	37	12	460
	Males	19	6	13	2	3	235	9	220	14	10	127	78	31	.....	8	244
	Females	11	6	11	1	2	204	12	205	8	3	106	69	.....	37	4	216
Grant	Total	52	43	49	7	9	781	32	727	55	31	390	246	85	74	18	813
	Males	38	27	28	3	6	441	24	400	38	27	230	135	85	.....	15	465
	Females	14	16	21	4	3	340	8	327	17	4	160	111	.....	74	3	348
Greene	Total	14	16	11	2	5	403	1	388	7	9	230	125	13	19	17	404
	Males	8	10	8	1	4	193	.....	183	4	6	111	59	13	.....	10	193
	Females	6	6	3	1	1	210	1	205	3	3	119	66	.....	19	7	211
Hamilton	Total	24	29	36	6	4	416	9	406	12	7	191	130	29	61	14	425
	Males	11	17	18	3	2	194	5	192	7	.....	109	58	29	.....	6	199
	Females	13	12	18	3	2	222	4	214	5	7	82	74	.....	61	9	226

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Hancock	Total	18	12	17	6	1	245	1	236	7	3	107	93	14	25	7	246
	Males	10	8	8	2	.....	129	1	125	2	3	61	52	14	.....	3	130
	Females	8	4	9	4	1	116	.....	111	5	.....	46	41	.....	25	4	116
Harrison	Total	13	17	28	.....	4	298	9	288	15	4	152	90	15	33	17	307
	Males	7	10	18	.....	1	146	4	144	5	1	91	36	15	.....	8	150
	Females	6	7	15	.....	3	152	5	144	10	3	61	54	.....	33	9	157
Hendricks	Total	24	23	27	4	1	281	8	276	6	7	130	99	13	37	10	289
	Males	14	7	9	2	1	140	6	140	1	5	81	46	13	.....	6	146
	Females	10	16	18	2	.....	141	2	136	5	2	49	53	.....	37	4	143
Henry	Total	23	35	47	9	1	420	9	415	10	4	187	138	37	55	12	429
	Males	10	20	25	4	1	217	4	213	7	1	105	76	37	.....	3	221
	Females	13	15	22	5	.....	203	5	202	3	3	82	62	.....	55	9	208
Howard	Total	30	21	19	3	1	378	11	371	14	4	164	151	15	50	9	389
	Males	16	12	11	.....	.....	199	5	194	7	3	95	88	15	.....	6	204
	Females	14	9	8	3	1	179	6	177	7	1	69	63	.....	50	3	185
Huntington	Total	18	24	34	6	2	344	.....	311	25	8	138	128	31	34	13	344
	Males	9	17	21	4	2	195	.....	178	15	2	84	74	31	.....	6	195
	Females	9	7	13	2	.....	149	.....	133	10	6	54	54	.....	34	7	149
Jackson	Total	19	19	33	5	3	461	6	424	38	5	245	143	30	42	7	467
	Males	12	7	11	2	2	220	5	201	19	5	127	67	30	.....	1	225
	Females	7	12	22	3	1	241	1	223	19	.....	118	76	.....	42	6	242
Jasper	Total	12	11	11	.....	1	165	.....	143	17	5	81	53	11	15	5	165
	Males	7	6	5	.....	.....	79	.....	66	12	2	40	26	11	.....	2	79
	Females	5	5	6	.....	1	86	.....	78	5	3	41	27	.....	15	3	86
Jay	Total	28	28	21	5	2	363	1	341	19	4	185	103	20	38	18	364
	Males	15	11	11	.....	2	192	1	181	10	2	118	52	20	.....	8	193
	Females	13	17	10	5	.....	171	.....	160	9	2	72	51	.....	38	10	171
Jefferson	Total	23	32	41	10	2	364	30	343	44	7	157	122	36	59	20	394
	Males	10	18	24	5	2	176	14	165	20	5	75	65	36	.....	14	190
	Females	13	14	17	5	.....	188	16	178	24	2	82	57	.....	59	6	204
Jennings	Total	16	20	20	1	1	235	6	207	29	5	93	97	20	21	10	241
	Males	14	11	12	1	1	127	1	106	19	3	44	57	20	.....	7	128
	Females	2	9	8	.....	.....	108	5	101	10	2	49	40	.....	21	3	113
Johnson	Total	30	20	19	7	1	288	7	283	8	4	106	121	21	41	6	295
	Males	16	6	7	4	.....	126	1	122	3	2	50	54	21	.....	2	127
	Females	14	14	12	3	1	162	6	161	5	2	56	67	.....	41	4	168

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TABLE 2—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Fayette	Total	13	13	19	2	2	215	5	202	13	5	102	61	15	24	18	220
	Males	5	6	12	.....	.....	118	2	111	5	4	65	32	15	.....	8	120
	Females	8	7	7	2	2	97	3	91	8	1	37	29	.....	24	10	100
Floyd	Total	36	27	24	7	2	452	56	426	73	9	238	169	23	70	8	508
	Males	17	14	11	6	1	223	30	214	34	5	131	96	23	.....	3	253
	Females	19	13	13	1	1	229	26	212	39	4	107	73	.....	70	5	255
Fountain	Total	19	15	26	3	5	312	3	293	15	7	158	100	18	33	6	315
	Males	12	7	13	1	2	162	1	152	7	4	88	53	18	.....	4	163
	Females	7	8	13	2	3	150	2	141	8	3	70	47	.....	33	2	152
Franklin	Total	20	23	28	3	2	244	1	191	45	9	100	79	14	42	10	245
	Males	7	10	12	3	2	116	1	96	18	3	50	48	14	.....	5	117
	Females	13	13	16	.....	.....	128	.....	95	27	6	50	31	.....	42	5	128
Fulton	Total	20	15	17	1	1	207	.....	197	9	1	78	81	14	23	11	207
	Males	11	8	8	.....	.....	100	.....	94	5	1	45	37	14	.....	4	100
	Females	9	7	9	1	1	107	.....	103	4	.....	33	44	.....	23	7	107
Gibson	Total	30	12	24	3	5	439	21	425	22	13	233	147	31	37	12	460
	Males	19	6	13	2	3	235	9	220	14	10	127	78	31	.....	8	244
	Females	11	6	11	1	2	204	12	205	8	3	106	69	.....	37	4	216
Grant	Total	52	43	49	7	9	781	32	727	55	31	390	246	85	74	18	813
	Males	38	27	28	3	6	441	24	400	38	27	230	135	85	.....	15	465
	Females	14	16	21	4	3	340	8	327	17	4	160	111	.....	74	3	348
Greene	Total	14	16	11	2	5	403	1	388	7	9	230	125	13	19	17	404
	Males	8	10	8	1	4	193	.....	183	4	6	111	59	13	.....	10	193
	Females	6	6	3	1	1	210	1	205	3	3	119	66	.....	19	7	211
Hamilton	Total	24	29	36	6	4	416	9	406	12	7	191	130	29	61	14	425
	Males	11	17	18	3	2	194	5	192	7	.....	109	56	29	.....	5	199
	Females	13	12	18	3	2	222	4	214	5	7	82	74	.....	61	9	226

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Hancock	Total	16	12	17	6	1	245	1	236	7	3	107	93	14	25	7	246
	Males	10	8	8	2	.....	129	1	125	2	3	61	52	14	.....	3	130
	Females	8	4	9	4	1	116	.....	111	5	.....	46	41	.....	25	4	116
Harrison	Total	13	17	28	.....	4	298	9	288	15	4	152	90	15	33	17	307
	Males	7	10	13	.....	1	146	4	144	5	1	91	36	15	.....	8	150
	Females	6	7	15	.....	3	152	5	144	10	3	61	54	.....	33	9	157
Hendricks	Total	24	28	27	4	1	281	8	276	6	7	130	99	13	37	10	289
	Males	14	7	9	2	1	140	6	140	1	5	81	46	13	.....	6	146
	Females	10	16	18	2	.....	141	2	136	5	2	49	53	.....	37	4	143
Henry	Total	23	35	47	9	1	420	9	415	10	4	187	138	37	55	12	429
	Males	10	20	25	4	1	217	4	213	7	1	105	76	37	.....	3	221
	Females	13	15	22	5	.....	203	5	202	3	3	82	62	.....	55	9	208
Howard	Total	30	21	19	3	1	378	11	371	14	4	164	151	15	50	9	389
	Males	16	12	11	.....	.....	190	5	194	7	3	95	88	15	.....	6	204
	Females	14	9	8	3	1	179	6	177	7	1	69	63	.....	50	3	185
Huntington	Total	18	24	34	6	2	344	.....	311	25	8	138	128	31	34	13	344
	Males	9	17	21	4	2	195	.....	178	15	2	84	74	31	.....	6	195
	Females	9	7	13	2	.....	149	.....	133	10	6	54	54	.....	34	7	149
Jackson	Total	19	19	33	5	3	461	6	424	38	5	245	143	30	42	7	467
	Males	12	7	11	2	2	220	5	201	19	5	127	67	30	.....	1	225
	Females	7	12	22	3	1	241	1	223	19	.....	118	76	.....	42	6	242
Jasper	Total	12	11	11	.....	1	165	.....	143	17	5	81	53	11	15	5	165
	Males	7	6	5	.....	.....	79	.....	66	12	2	40	26	11	.....	2	79
	Females	5	5	6	.....	1	86	.....	78	5	3	41	27	.....	15	3	86
Jay	Total	28	28	21	5	2	363	1	341	19	4	185	103	20	38	18	364
	Males	15	11	11	.....	2	192	1	181	10	2	113	52	20	.....	8	193
	Females	13	17	10	5	.....	171	.....	160	9	2	72	51	.....	38	10	171
Jefferson	Total	23	32	41	10	2	364	30	343	44	7	157	122	36	59	20	394
	Males	10	18	24	5	2	176	14	165	20	5	75	65	36	.....	14	190
	Females	13	14	17	5	.....	188	16	178	24	2	82	57	.....	59	6	204
Jennings	Total	16	20	20	1	1	235	6	207	29	5	93	97	20	21	10	241
	Males	14	11	12	1	1	127	1	106	19	3	44	57	20	.....	7	128
	Females	2	9	8	.....	.....	108	5	101	10	2	49	40	.....	21	3	113
Johnson	Total	30	20	19	7	1	288	7	283	8	4	106	121	21	41	6	295
	Males	16	6	7	4	.....	126	1	122	3	2	50	54	21	.....	2	127
	Females	14	14	12	3	1	162	6	161	5	2	56	67	.....	41	4	168

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TABLE 2—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Knox	Total	22	15	18	2	2	498	12	461	36	14	289	138	21	48	15	511
	Males	14	5	4	2	.....	246	7	224	18	11	161	68	21	.....	3	253
	Females	8	10	14	.....	2	252	6	237	18	3	128	70	.....	48	12	258
Kosciusko	Total	33	22	21	4	3	314	1	324	14	7	151	120	26	31	17	345
	Males	21	13	12	2	1	193	.....	177	11	5	85	72	26	.....	10	193
	Females	12	9	9	2	2	151	1	147	3	2	66	48	.....	31	7	152
Lagrange	Total	22	11	26	2	1	212	1	200	12	1	78	82	16	26	11	213
	Males	15	8	16	1	.....	117	1	109	9	.....	39	53	16	.....	10	118
	Females	7	3	10	1	1	95	.....	91	3	1	39	29	.....	26	1	95
Lake	Total	23	21	34	2	3	533	1	368	155	11	298	130	29	53	24	534
	Males	10	11	16	.....	3	294	1	200	86	9	181	68	29	.....	17	295
	Females	13	10	18	2	.....	239	.....	168	69	2	117	62	.....	53	7	239
Laporte	Total	47	37	45	4	4	505	5	347	135	28	212	184	41	59	14	510
	Males	29	20	14	3	3	270	5	188	68	19	123	105	41	.....	6	275
	Females	18	17	31	1	1	235	.....	159	67	9	89	79	.....	59	8	235
Lawrence	Total	16	16	14	4	6	332	7	325	3	11	189	108	12	19	11	339
	Males	8	12	10	.....	4	182	5	177	2	8	110	59	12	.....	6	187
	Females	8	4	4	4	2	150	2	148	1	3	79	49	.....	19	5	152
Madison	Total	39	35	36	4	5	1,034	28	984	50	28	585	346	50	60	21	1,062
	Males	24	24	19	3	4	555	18	521	29	23	338	171	50	.....	14	573
	Females	15	11	17	1	1	479	10	463	21	5	247	175	.....	60	7	489
Marion	Total	150	147	158	20	15	2,873	403	2,687	402	187	1,477	1,149	180	385	85	3,276
	Males	72	76	80	9	4	1,490	216	1,393	214	99	846	640	180	.....	40	1 706
	Females	78	71	78	11	11	1,383	187	1,294	188	88	631	509	.....	385	45	1,570
Marshall	Total	25	24	28	7	1	291	.....	254	30	7	123	92	16	43	17	291
	Males	8	17	13	2	1	160	.....	140	15	5	78	54	16	.....	12	160
	Females	17	7	15	5	.....	131	.....	114	15	2	45	38	.....	43	5	131

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Martin	Total	7	13	19	2	2	248	.....	238	7	3	136	70	13	19	10	248
	Males	1	9	9	.....	1	121	.....	113	6	2	69	82	13		7	121
	Females	6	4	10	2	1	127	.....	125	1	1	67	38	.....	19	3	127
Miami	Total	23	27	27	4	3	391	3	359	28	7	170	143	24	44	13	394
	Males	14	12	19	1	2	214	3	194	18	5	105	83	24	.....	5	217
	Females	9	15	8	3	1	177	.....	165	10	2	65	60	.....	44	8	177
Monroe	Total	16	12	22	3	3	260	35	281	8	6	147	82	17	39	10	295
	Males	6	7	10	1	2	135	3	131	5	2	72	43	17	.....	6	138
	Females	10	5	12	2	1	125	32	150	3	4	75	39	.....	39	4	157
Montgomery	Total	37	31	38	6	.....	402	5	387	13	7	170	139	25	58	15	407
	Males	19	12	23	2	.....	209	1	199	6	5	97	81	25	.....	7	210
	Females	18	19	15	4	.....	193	4	188	7	2	73	58	.....	58	8	197
Morgan	Total	29	24	17	3	4	276	2	266	3	9	105	101	17	38	17	278
	Males	16	15	10	...	2	151	1	143	1	8	58	63	17	.....	14	152
	Females	13	9	7	3	2	125	1	123	2	1	47	38	.....	38	3	126
Newton	Total	4	6	10	1	1	133	.....	119	10	4	74	34	5	16	4	133
	Males	2	.....	5	.....	.....	60	.....	54	3	3	38	17	5	.....	.....	60
	Females	2	6	5	1	1	73	.....	65	7	1	36	17	.....	16	4	73
Noble	Total	24	28	26	7	1	300	.....	266	28	6	114	112	25	41	8	300
	Males	12	14	15	2	1	159	.....	139	16	4	71	58	25	.....	5	159
	Females	12	14	11	5	.....	141	.....	127	12	2	43	54	.....	41	3	141
Ohio	Total	8	7	8	.....	.....	48	4	40	10	2	15	22	2	12	1	52
	Males	5	5	4	.....	.....	21	1	15	7	.....	6	13	2	.....	1	22
	Females	3	2	4	.....	.....	27	3	25	3	2	9	9	.....	12	.....	30
Orange	Total	11	12	18	3	4	253	1	247	.....	7	133	81	7	25	8	254
	Males	4	6	11	.....	3	120	1	118	.....	3	68	42	7	.....	4	121
	Females	7	6	7	3	1	133	.....	129	.....	4	65	39	.....	25	4	133
Owen	Total	13	18	15	2	1	228	.....	209	6	13	110	79	10	23	6	228
	Males	4	8	8	1	1	112	.....	101	4	7	64	34	10	.....	4	112
	Females	9	10	7	1	.....	116	.....	108	2	6	46	45	.....	23	2	116
Parke	Total	20	25	15	5	.....	287	.....	266	17	4	124	108	20	27	8	287
	Males	9	14	9	3	.....	149	.....	134	11	4	69	54	20	.....	6	149
	Females	11	11	6	2	.....	138	.....	132	6	.....	55	54	.....	27	2	138
Perry	Total	23	18	22	2	2	276	7	218	52	13	142	78	20	36	7	283
	Males	16	7	9	1	2	131	4	101	29	5	69	41	20	.....	5	135
	Females	7	11	13	1	.....	145	3	117	23	8	73	37	.....	36	2	148

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TABLE 2—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Pike	Total	19	18	13	4	.....	377	.....	366	9	2	199	130	14	21	13	377
	Males	14	11	5	3	.....	196	.....	189	5	2	110	64	14	.....	8	196
	Females	5	7	8	1	.....	181	.....	177	4	.....	89	66	.....	21	5	181
Porter	Total	28	21	18	1	.....	241	.....	185	54	2	96	85	12	32	16	241
	Males	14	16	10	.....	.....	123	.....	90	31	2	50	49	12	.....	12	123
	Females	14	5	8	1	.....	118	.....	95	23	.....	46	36	.....	32	4	118
Posey	Total	19	21	21	2	5	417	32	396	42	11	238	124	24	46	17	449
	Males	10	9	11	1	3	216	22	208	24	6	143	61	24	.....	10	238
	Females	9	12	10	1	2	201	10	188	18	5	95	63	.....	46	7	211
Pulaski	Total	8	4	11	1	2	154	1	125	13	17	79	51	4	12	9	155
	Males	4	4	5	.....	1	82	.....	68	8	6	47	28	4	.....	3	82
	Females	4	.....	6	1	1	72	1	57	5	11	32	23	.....	12	6	73
Putnam	Total	20	11	36	2	4	304	3	296	9	2	142	110	17	30	8	307
	Males	13	4	21	1	3	156	1	150	6	1	78	57	17	.....	5	157
	Females	7	7	15	1	1	148	2	146	3	1	64	53	.....	30	3	150
Randolph	Total	23	30	31	6	2	403	4	393	10	4	181	146	22	46	12	407
	Males	14	16	13	3	2	206	1	196	9	2	98	79	22	.....	8	207
	Females	9	14	18	3	.....	197	3	197	1	2	83	67	.....	46	4	200
Ripley	Total	20	29	25	6	3	273	2	210	57	8	109	110	18	29	9	275
	Males	12	14	14	2	.....	143	1	102	37	5	58	68	18	.....	5	144
	Females	8	15	11	4	3	130	1	108	20	3	51	47	.....	29	4	131
Rush	Total	20	22	20	.....	1	272	6	270	6	2	122	101	18	31	6	278
	Males	12	10	13	.....	1	132	3	132	2	1	65	50	18	.....	2	135
	Females	8	12	7	.....	.....	140	3	138	4	1	57	51	.....	31	4	143
Scott	Total	8	7	8	.....	2	125	.....	117	4	4	60	42	5	15	3	125
	Males	4	3	3	.....	1	57	.....	52	2	3	32	20	5	.....	.....	57
	Females	4	4	5	.....	1	68	.....	65	2	1	28	22	.....	15	3	68

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Shelby	Total	25	14	23	4	.....	357	5	343	18	1	163	132	20	38	9	362
	Males	14	6	9	3	.....	190	.....	178	12	.....	96	72	20	.....	3	190
	Females	11	8	14	1	.....	167	5	165	6	1	68	60	.....	38	6	172
Spencer	Total	12	11	14	1	3	300	22	288	26	8	169	102	12	27	12	322
	Males	6	4	6	1	1	145	13	142	12	4	90	51	12	.....	5	158
	Females	6	7	8	.....	2	155	9	146	14	4	79	51	.....	27	7	164
Starke	Total	8	11	9	.....	.....	152	.....	123	28	1	74	53	3	14	8	152
	Males	2	8	2	.....	.....	80	.....	64	15	1	43	30	3	.....	4	80
	Females	6	3	7	.....	.....	72	.....	59	13	.....	31	23	.....	14	4	72
Steuben	Total	21	10	23	3	2	173	.....	156	5	12	51	71	13	23	15	173
	Males	8	6	11	.....	2	87	.....	81	1	5	33	35	13	.....	6	87
	Females	13	4	12	3	.....	86	.....	75	4	7	18	36	.....	23	9	86
St. Joseph	Total	48	45	39	6	2	800	14	633	162	19	431	237	50	65	31	814
	Males	30	21	22	4	2	417	7	321	86	17	229	127	50	.....	18	424
	Females	18	24	17	2	.....	383	7	312	76	2	202	110	.....	65	13	390
Sullivan	Total	22	16	16	1	5	434	5	413	12	14	237	143	13	26	20	439
	Males	8	9	11	.....	2	215	1	202	8	6	117	74	13	.....	12	216
	Females	14	7	5	1	3	219	4	211	4	8	120	69	.....	26	8	223
Switzerland	Total	8	14	26	1	3	158	4	153	6	3	62	58	12	25	5	162
	Males	3	8	14	.....	1	77	3	73	4	3	31	33	12	.....	4	80
	Females	5	6	12	1	2	81	1	80	2	.....	31	25	.....	25	1	82
Tippecanoe	Total	53	33	33	6	3	566	10	471	93	12	247	192	43	64	30	576
	Males	33	21	20	5	1	315	4	252	58	9	145	112	43	.....	19	319
	Females	20	12	13	1	2	251	6	219	35	3	102	80	.....	64	11	257
Tipton	Total	9	7	12	1	5	269	.....	262	4	3	144	82	8	22	13	269
	Males	6	6	4	1	2	147	.....	146	1	.....	95	39	8	.....	5	147
	Females	3	1	8	.....	3	122	.....	116	3	3	49	43	.....	22	8	122
Union	Total	9	4	13	2	1	73	3	65	6	5	25	27	7	14	3	76
	Males	6	2	7	1	1	35	.....	30	3	2	12	13	7	.....	3	35
	Females	3	2	6	1	.....	38	3	35	3	3	13	14	.....	14	....	41
Vanderburgh	Total	53	39	58	5	3	915	181	848	206	42	494	391	71	133	7	1,096
	Males	18	21	26	1	2	488	84	453	103	16	292	205	71	.....	4	572
	Females	35	18	32	4	1	427	97	395	103	26	202	186	.....	133	3	524
Vermillion	Total	11	14	9	1	4	247	.....	224	16	7	122	73	17	22	13	247
	Males	8	8	5	.....	2	131	.....	117	10	4	73	32	17	.....	9	131
	Females	3	6	4	1	2	116	.....	107	6	3	49	41	.....	22	4	116

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TABLE 2—Continued.

COUNTIES.	Sex.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	N. R.	Single.	Married.	Widower.	Widow.	N. R.	Total Males and Females.
Vigo	Total	52	44	40	9	12	973	49	865	116	41	532	304	56	101	29	1,022
	Males	23	20	17	2	6	515	26	450	59	32	296	168	56	.....	21	541
	Females	29	24	23	7	6	458	23	415	57	9	236	136	.....	101	8	481
Wabash	Total	27	36	21	3	.....	356	1	328	23	6	144	123	31	44	15	357
	Males	14	20	12	1	.....	176	.....	151	20	5	76	61	31	.....	8	176
	Females	13	16	9	2	.....	180	1	177	3	1	68	62	.....	44	7	181
Warren	Total	8	7	7	.....	3	111	.....	99	8	4	45	44	8	9	5	111
	Males	4	4	7	.....	1	64	.....	54	7	3	28	25	8	.....	3	64
	Females	4	3	.....	.....	2	47	.....	45	1	1	17	19	.....	9	2	47
Warrick	Total	20	18	16	2	2	310	20	288	36	6	163	113	20	30	4	330
	Males	10	12	9	2	1	151	13	138	22	4	78	65	20	.....	1	164
	Females	10	6	7	.....	1	159	7	150	14	2	85	48	.....	30	3	166
Washington	Total	19	24	27	2	4	308	.....	298	7	3	136	101	18	32	21	308
	Males	9	8	17	2	3	144	.....	139	4	1	73	47	18	.....	6	144
	Females	10	16	10	....	1	164	.....	159	3	2	63	54	.....	32	15	164
Wayne	Total	46	55	61	17	.....	662	35	598	76	23	273	255	51	93	25	697
	Males	28	24	41	11	.....	348	19	311	43	13	154	151	51	.....	11	367
	Females	18	31	30	6	.....	314	16	287	33	10	119	104	.....	93	14	330
Wells	Total	12	21	31	2	.....	288	1	275	13	1	144	79	16	40	10	289
	Males	6	11	15	2	.....	138	.....	131	6	1	75	41	16	.....	6	138
	Females	6	10	16	.....	.....	150	1	144	7	.....	69	38	.....	40	4	151
White	Total	22	17	8	5	3	218	.....	195	16	7	110	62	16	23	7	218
	Males	11	9	5	2	1	108	.....	95	9	4	57	33	16	.....	2	10
	Females	11	8	3	3	2	110	.....	100	7	3	53	29	.....	23	5	11

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Whitley	Total	16	12	26	1	5	216	.....	200	13	3	77	87	20	26	6	216
	Males	12	5	14	.....	.....	111	.....	101	9	1	40	47	20	....	4	111
	Females	4	7	12	1	5	105	.....	99	4	2	37	40	.....	26	2	105
	Males	1,190	1,103	1,230	151	130	18,150	658	16,337	1,846	625	9,502	6,441	2,186	....	679	18,808
	Females	1,035	1,012	1,160	186	101	17,102	634	15,786	1,525	425	7,554	5,678	...	3,939	565	17,736
Grand total	.....	2,225	2,115	2,390	337	231	35,252	1,292	32,123	3,371	1,050	17,956	12,119	2,186	3,939	1,244	36,544

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TABLE A.

Births by Months, Color and Nationality of Parents, for Year Ending December 31, 1901.

COUNTIES.	1901.															Color.				Nationality.				Not Reported.	
																White.		Color'd.		American.		Foreign.			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Males.	Females.	Fathers.	Mothers.	Fathers.	Mothers.	Fathers.	Mothers.
Adams	35	34	43	40	39	41	33	47	49	47	45	45	263	235	498	263	235	....	....	442	468	48	25	5	2
Allen	91	69	75	114	77	106	129	99	90	85	131	90	620	536	1156	570	484	50	52	839	882	183	150	127	117
Bartholomew	45	48	41	39	48	39	50	47	53	73	57	46	325	261	586	320	260	5	1	556	571	20	8	3	....
Benton	22	23	27	24	24	18	12	20	16	26	10	19	122	114	236	122	113	....	1	210	211	15	7	11	18
Blackford	48	40	36	29	37	30	20	51	45	59	18	39	242	210	452	242	210	....	....	313	317	31	23	106	110
Boone	55	30	35	67	28	26	63	30	39	59	24	33	259	230	489	258	230	1	....	481	483	2	1	1	....
Brown	26	37	16	18	11	8	13	23	18	19	8	4	106	95	201	106	95	....	....	180	182	....	....	20	18
Carroll	21	18	17	27	19	21	24	24	20	25	23	19	129	129	258	129	129	....	....	199	200	1	....	56	56
Cass	40	25	31	28	26	20	17	44	42	17	26	21	172	165	337	169	163	3	2	269	265	37	34	29	36
Clark	42	37	30	28	35	35	41	49	50	38	42	43	268	202	470	236	182	32	20	447	455	5	....	16	13
Clay	79	87	76	60	62	56	43	49	72	65	66	69	419	365	784	414	360	5	5	673	712	87	53	8	3
Clinton	48	50	39	30	22	15	37	45	37	28	29	26	209	197	406	208	196	1	1	387	386	....	....	13	14
Crawford	20	19	22	20	22	25	19	26	17	30	25	17	136	126	262	136	126	....	....	195	215	42	35	25	12
Daviess	51	66	57	61	31	40	61	78	46	56	50	46	343	300	643	341	297	2	3	622	632	4	2	8	....
Dearborn	30	37	28	26	20	29	19	36	29	22	32	24	170	162	332	163	162	7	....	305	315	15	10	11	6
Decatur	35	21	41	23	22	21	33	26	37	34	27	20	169	171	340	168	171	1	....	320	322	7	7	11	9
Dekalb	47	33	35	43	25	22	32	31	24	44	21	23	197	173	370	197	173	....	....	341	354	25	12	....	....
Delaware	95	74	66	100	82	62	75	91	63	114	75	96	505	488	993	498	482	7	6	946	962	27	16	8	3
Dubois	55	40	38	34	30	16	40	47	45	38	36	33	217	235	452	217	235	....	....	431	438	11	5	1	....
Elkhart	40	38	37	38	26	34	42	26	23	44	36	46	245	185	430	245	185	....	....	372	377	17	16	38	34

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Fayette	17	22	19	15	15	19	23	27	14	20	11	5	96	111	207	94	110	3	1	197	195	8	9	1	2
Floyd	27	33	27	20	17	17	39	24	15	32	14	28	162	131	293	151	127	11	4	286	277	12	8	8	1
Fountain	34	21	18	32	14	26	24	23	21	41	16	20	162	128	290	162	128	....	....	285	285	2	2	....	....
Franklin	26	21	27	18	26	19	25	26	18	20	21	14	127	134	261	127	134	....	....	247	252	10	4	2	3
Fulton	30	23	27	30	22	10	23	24	29	17	20	12	152	115	267	152	115	....	....	258	262	2	....	3	1
Gibson	65	53	50	22	41	33	62	66	50	45	50	56	309	284	593	301	277	8	7	569	581	10	4	6	....
Grant	78	64	77	81	71	68	78	76	73	54	88	79	464	423	887	463	418	1	5	396	403	30	29	448	442
Greene	37	88	39	38	49	36	52	36	34	48	29	36	253	219	472	253	219	....	....	427	438	9	7	32	23
Hamilton	56	52	42	54	35	24	78	47	41	61	32	39	320	241	561	315	235	5	6	531	547	12	8	13	1
Hancock	30	40	30	30	22	30	32	26	26	42	39	16	188	175	363	186	175	2	....	347	357	8	....	4	2
Harrison	31	23	28	39	20	16	44	44	25	37	32	30	188	181	369	186	180	2	1	365	365	....	....	....	....
Hendricks	36	22	25	35	34	27	43	26	29	21	19	6	162	161	323	158	161	4	....	312	315	1	1	5	2
Henry	47	42	61	33	45	56	38	35	59	52	27	60	288	267	555	284	262	4	5	532	544	8	4	10	2
Howard	49	41	36	34	41	43	39	48	46	41	50	41	262	247	509	261	247	1	....	502	506	6	....	....	....
Huntington	44	42	37	29	30	34	37	33	52	53	28	43	240	222	462	240	222	....	....	442	451	13	5	1	....
Jackson	26	27	77	61	29	26	53	47	56	66	40	56	273	297	564	271	287	2	4	530	539	9	6	12	6
Jasper	15	14	27	24	11	9	29	15	11	39	17	14	116	109	225	116	109	....	....	191	188	17	19	16	17
Jay	53	47	56	56	40	39	44	53	36	53	35	48	282	278	560	280	274	2	4	541	549	12	4	....	....
Jefferson	31	17	19	18	21	7	45	18	22	26	15	24	130	133	263	125	130	5	3	249	251	6	4	2	2
Jennings	16	14	19	24	12	12	20	31	24	17	21	23	107	126	233	101	121	6	5	220	224	8	2	3	....
Johnson	17	11	11	8	12	10	38	29	21	28	12	20	108	109	217	107	107	1	2	213	217	....	....	4	....
Knox	55	63	68	72	74	41	73	74	90	74	67	68	450	369	819	448	363	2	6	752	788	36	7	10	3
Kosciusko	55	34	44	44	33	26	34	38	39	36	23	36	235	207	442	235	207	....	....	393	382	....	....	45	56
Lagrange	6	8	13	27	24	33	31	28	36	35	24	18	154	129	283	154	129	....	....	244	249	8	3	27	27
Lake	30	40	45	40	65	50	30	43	40	20	24	39	270	196	466	270	196	....	....	316	405	148	59	2	2
Laporte	64	50	61	53	54	46	56	61	45	63	42	52	351	296	647	350	296	1	....	469	471	168	166	3	3
Lawrence	25	29	51	40	26	28	34	54	48	36	29	38	214	224	438	213	223	1	1	424	424	....	....	12	12
Madison	146	124	112	145	104	136	157	145	135	171	143	155	853	820	1673	848	809	5	11	1501	1536	87	106	14	20
Marion	289	297	352	291	297	272	368	314	311	305	283	299	1908	1770	3678	1755	1619	153	151	3042	3208	413	368	180	89
Marshall	37	41	40	30	40	36	22	30	31	29	22	33	205	186	391	205	285	....	1	365	379	7	6	15	2
Martin	20	26	29	14	18	17	23	29	22	20	22	26	139	127	266	138	127	1	....	183	204	55	38	28	24
Miami	34	39	43	36	25	24	32	37	31	38	26	35	188	212	400	187	212	1	....	329	356	34	24	32	15
Monroe	22	20	22	20	21	9	20	26	8	27	15	17	109	118	227	107	106	2	12	225	226	....	....	1	....
Montgomery	75	52	45	55	34	33	57	55	36	55	51	35	291	292	583	290	291	1	1	445	454	7	1	127	124
Morgan	31	18	24	16	18	14	28	20	21	35	19	17	134	127	261	134	127	....	....	259	260	....	....	1	....
Newton	35	15	22	17	23	11	18	28	19	19	16	14	118	117	235	118	117	....	....	191	201	26	19	16	13
Noble	24	38	32	35	29	29	31	34	33	28	29	25	188	179	367	188	179	....	....	353	355	7	4	5	6
Ohio	12	10	6	3	6	5	8	5	10	7	2	3	41	36	77	41	35	....	1	63	63	....	....	14	14
Orange	21	33	11	9	15	7	31	24	22	31	25	21	121	129	250	121	128	....	1	247	248	....	....	1	....
Owen	40	34	31	22	19	18	17	24	28	27	23	27	160	150	310	159	150	1	....	306	306	....	....	....	....

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TABLE A—Continued.

COUNTIES.	1901.												Males.	Females.	Total.	Color.				Nationality.				Not Reported.	
																White.		Color'd.		American.		Foreign.			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				Males.	Females.	Males.	Females.	Fathers.	Mothers.	Fathers.	Mothers.	Fathers.	Mothers.
Parke	22	23	17	14	13	6	16	16	12	21	34	21	114	101	215	113	101	1	....	151	149	2	3	60	61
Perry	29	23	25	40	35	21	11	12	33	50	24	23	170	156	326	169	153	1	3	304	312	15	9	4	2
Pike	44	27	29	21	20	22	31	30	36	33	29	23	172	178	350	171	178	1	....	343	344	1	....	....	....
Porter	13	12	13	13	23	14	25	17	21	26	20	22	117	102	219	117	102	....	....	166	187	50	29	....	....
Posey	43	35	43	39	38	30	43	44	54	58	46	44	253	264	517	247	246	6	18	493	505	14	3	2	1
Pulaski	3	7	10	14	8	5	6	10	13	11	15	5	63	44	107	63	44	....	....	92	102	10	4	5	1
Putnam	40	31	48	20	38	29	56	48	32	51	31	44	241	227	468	239	226	2	1	453	462	....	....	9	....
Randolph	49	46	52	36	50	50	50	62	44	47	25	36	292	255	547	292	255	....	....	456	466	....	....	84	74
Ripley	52	23	22	21	26	13	50	29	19	35	18	15	161	162	323	161	162	....	....	54	58	3	1	264	262
Rush	21	23	18	2	19	13	22	31	27	15	19	20	114	116	230	110	114	4	2	148	148	1	1	80	80
Scott	13	17	18	10	10	10	16	10	9	15	14	11	80	73	153	80	73	....	....	152	152	....	....	....	....
Shelby	37	30	32	60	22	24	48	33	34	70	45	23	265	193	458	261	192	4	1	388	396	13	6	56	55
Spencer	38	23	29	25	10	10	18	11	14	30	12	12	122	110	232	120	108	2	2	183	187	1	....	45	42
Starke	14	11	16	14	20	19	17	19	21	15	15	17	100	98	198	100	98	....	....	166	182	31	15	....	....
Steuben	13	11	14	12	10	3	14	16	6	10	8	1	72	46	118	72	46	....	....	114	115	1	....	1	1
St. Joseph	66	58	36	76	35	16	75	63	51	60	44	38	312	306	618	310	305	2	1	393	412	216	199	2	....
Sullivan	16	28	31	32	21	26	22	28	31	36	42	35	172	176	348	171	176	1	....	342	343	6	5	....	....
Switzerland	22	24	23	15	7	6	22	28	13	17	10	12	109	90	199	109	90	....	....	162	162	....	....	33	33
Tippecanoe	48	34	31	22	17	24	17	18	34	42	42	31	180	180	360	178	180	2	....	298	317	49	33	7	4
Tipton	31	27	16	18	33	21	35	21	37	24	38	61	187	175	362	187	175	....	....	345	354	2	1	12	4
Union	5	9	4	2	2	1	2	2	2	2	7	3	23	18	41	23	18	....	....	40	41	....	....	1	....
Vanderburgh	134	77	125	82	77	66	118	100	106	102	129	87	634	569	1203	592	536	42	33	1031	1102	140	72	20	17
Vermillion	14	15	33	29	26	35	23	23	21	37	18	31	163	142	305	160	142	3	....	274	274	18	20	9	7
Vigo	79	86	90	77	79	85	81	82	76	91	51	75	518	434	952	502	418	16	16	856	899	68	39	20	6

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Wabash	15	15	21	48	34	38	35	28	32	42	35	31	210	164	374	210	164	....	....	314	314	....	....	60	60
Warren	21	21	15	6	10	6	14	18	10	8	5	6	76	64	140	76	64	....	....	132	133	2	1	6	6
Warrick	50	43	57	40	28	30	34	21	32	35	29	23	205	217	422	199	212	6	5	231	241	60	25	126	151
Washington	24	32	21	21	14	15	22	17	27	20	22	19	133	121	254	133	121	....	....	175	175	....	.. .	77	77
Wayne	64	46	58	44	55	46	67	64	55	57	48	41	325	320	645	310	301	15	19	599	618	27	17	13	4
Wells	40	27	30	38	31	38	33	32	36	28	37	41	196	215	411	196	215	....	....	403	404	7	4	1	3
White	27	17	19	41	23	17	48	28	28	64	57	36	202	203	405	202	203	....	....	153	154	1	....	242	242
Whitley	29	21	25	19	18	19	12	15	23	16	17	28	129	113	242	129	113	....	....	239	241	3	1	....	....
Total	3,827	3,386	3,614	3,470	3,070	2,813	3,812	3,686	3,511	3,965	3,268	3,302	21,744	19,980	41,724	21,298	19,556	446	424	35,965	36,959	2,492	1,809	2,839	2,528

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TABLE B.

Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births, Year Ending December 31, 1901.

COUNTIES.	Total.	Number of Children Born to Each Mother.												
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.
Adams	498	111	99	81	63	40	23	24	21	16	10	4	3	3
Allen	1,156	289	235	158	131	94	62	48	34	19	9	8	11	58
Bartholomew	586	169	113	72	66	57	34	24	12	15	11	1	5	7
Benton	236	73	50	38	20	15	10	7	6	4	4	2	3	4
Blackford	452	146	105	81	34	32	16	21	5	3	3	3	1	2
Boone	489	140	109	64	54	44	28	22	9	4	5	3	3	4
Brown	201	44	33	38	23	19	13	9	10	9	1	.....	1	1
Carroll	258	86	53	30	32	18	14	8	8	4	.....	2	2	1
Cass	337	105	59	50	39	25	20	12	7	2	4	1	2	11
Clark	470	139	116	71	42	40	24	10	14	5	4	1	2	2
Clay	784	198	144	134	85	73	43	34	22	13	11	5	9	18
Clinton	406	114	81	56	57	33	16	19	15	10	3	2	.....	.....
Crawford	262	78	62	43	33	11	16	7	5	5	1	1	.....	.....
Daviess	643	169	143	89	62	50	44	39	21	12	4	6	3	1
Dearborn	332	103	70	44	38	19	17	17	6	1	5	1	1	10
Decatur	340	95	60	54	33	35	19	12	12	7	2	6	1	4
Dekalb	370	120	78	62	46	25	16	7	6	3	.....	.....	3	4
Delaware	993	321	237	133	113	61	46	22	20	22	6	6	3	3
Dubois	452	114	65	53	53	51	32	20	32	17	6	3	6	.....
Elkhart	430	139	106	60	36	27	23	17	11	7	1	.....	2	2

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Fayette	207	62	50	25	25	9	10	11	4	8	1	.....	.....	2
Floyd	293	92	66	48	27	21	9	16	5	4	3	1	.....	1
Fountain	290	82	58	35	36	21	25	12	7	5	3	4	1	1
Franklin	261	64	51	38	29	24	19	13	4	3	3	3	2	8
Fulton	267	85	62	39	22	25	11	7	7	6	1	2	.....	.....
Gibson	593	156	112	88	59	52	50	31	23	5	3	5	3	6
Grant	887	277	181	138	87	77	44	22	14	12	8	3	9	15
Greene	472	145	90	65	52	49	26	22	8	6	1	1	2	5
Hamilton	561	155	116	88	64	47	30	22	15	10	4	3	2	5
Hancock	363	99	86	55	35	28	20	14	7	7	4	1	4	3
Harrison	369	111	74	49	42	27	26	14	7	7	5	2	3	2
Hendricks	323	94	71	51	38	23	22	10	2	6	2	1	.....	3
Henry	555	180	130	69	60	38	25	23	17	6	2	1	3	1
Howard	509	149	103	91	50	36	36	12	18	4	5	3	2	.....
Huntington	462	162	101	64	37	35	19	16	11	3	4	5	3	2
Jackson	564	125	123	93	55	53	33	26	15	12	10	5	8	6
Jasper	225	63	37	41	27	12	9	9	10	6	3	2	4	2
Jay	560	160	105	86	61	51	32	21	17	7	5	4	1	10
Jefferson	263	69	62	37	24	20	14	12	12	3	2	3	3	2
Jennings	233	62	52	40	23	15	17	9	5	6	1	.....	1	2
Johnson	217	48	46	39	36	20	10	10	3	3	2	.....	.....	.....
Knox	819	199	149	145	97	75	52	33	23	16	12	4	6	8
Kosciusko	442	140	97	68	43	33	24	16	12	3	2	4	.....	.....
Lagrange	283	83	53	37	35	30	14	12	10	5	.....	2	.....	2
Lake	466	146	113	69	40	46	19	15	13	5	.....	.....	.....	.....
Laporte	647	201	127	97	60	48	31	31	19	12	6	6	6	3
Lawrence	438	139	81	70	46	32	25	23	7	5	5	2	3	.....
Madison	1,673	473	364	225	198	121	98	64	44	31	20	9	12	15
Marion	3,678	1,276	774	523	386	246	165	95	74	49	28	13	27	22
Marshall	391	124	74	56	36	27	26	16	16	6	4	2	1	3
Martin	266	80	50	41	19	20	19	11	8	2	7	3	3	3
Miami	400	141	71	52	47	33	15	17	11	2	5	1	1	4
Monroe	227	46	43	41	18	16	22	11	10	8	6	3	3	.....
Montgomery	583	171	134	82	71	47	29	18	17	6	4	.....	1	3
Morgan	261	89	45	41	34	18	14	7	9	2	.....	.....	1	1
Newton	235	63	44	43	31	14	7	12	4	5	5	.....	1	6
Noble	367	113	83	57	44	28	19	15	3	1	2	.....	1	1
Ohio	77	18	13	8	13	9	5	1	5	2	1	1	.....	1
Orange	250	69	49	31	31	20	21	12	6	3	3	2	1	2
Owen	310	77	65	55	39	22	12	12	7	6	4	6	4	1

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TABLE B—Continued.

COUNTIES.	Total.	Number of Children Born to Each Mother.												
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.
Parke	215	57	37	38	21	24	12	9	10	1	3	1	.....	2
Perry	326	76	56	41	40	32	19	18	14	7	1	4		11
Pike	350	81	71	52	39	49	11	10	12	7	6	3	5	4
Porter	219	59	49	29	18	21	11	12	8	4	5	.....	2	1
Posey	517	125	96	93	74	46	31	12	13	12	4	5	8	3
Pulaski	107	20	15	11	19	10	11	8	4	3	.....	3	3	.....
Putnam	468	143	98	68	46	51	31	13	7	4	2	2	3	.....
Randolph	547	153	96	77	50	42	28	21	15	4	5	4	3	49
Ripley	323	97	60	43	40	27	19	11	13	6	4	1	2	.....
Rush	230	61	42	33	34	23	21	5	7	1	1	.....	1	1
Scott	153	43	40	25	14	11	11	3	1	2	1	.....	.....	2
Shelby	458	138	94	61	59	37	16	16	14	14	4	2	2	1
Spencer	232	46	42	40	35	25	18	13	7	3	.....	2	1	.....
Starke	198	54	34	15	24	13	15	14	4	7	2	2	3	1
Steuben	118	23	34	25	15	9	6	.....	2	2	1	.....	1	.....
St. Joseph	618	187	121	90	62	48	35	25	12	7	6	7	12	6
Sullivan	348	131	71	59	31	21	16	12	2	1	1	.....	1	2
Switzerland	199	50	47	26	14	16	21	13	4	.....	1	2	1	4
Tippecanoe	360	121	58	51	44	30	16	14	8	6	1	1	7	3
Tipton	362	94	80	52	32	42	30	12	8	2	4	3	2	1
Union	41	15	11	6	3	4	.....	1	.....	.....	1	.....	.....	.....
Vanderburgh	1,203	382	221	183	101	88	79	56	33	28	14	9	6	3
Vermillion	305	82	51	55	40	29	16	8	13	4	.....	1	1	5
Vigo	952	289	202	143	105	64	45	41	18	7	8	6	4	20

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Wabash	374	90	61	49	29	16	15	7	6	2	2	.....	.....	97
Warren	140	36	32	23	18	10	7	4	7	.....	.....	2	.....	1
Warrick	422	141	73	48	38	25	20	24	9	4	.....	.....	.....	40
Washington	254	67	58	23	26	28	17	7	8	7	3	2	3	5
Wayne	645	233	126	88	77	49	27	15	7	12	3	1	2	5
Wells	411	132	79	69	40	30	22	10	7	7	11	1	3	.....
White	405	100	91	64	53	26	22	14	13	15	1	2	4	.....
Whitley	242	81	61	37	17	16	14	6	3	3	2	1	1	.....
Total	41,724	12,243	8,529	6,158	4,495	3,299	2,282	1,566	1,074	657	379	226	263	553

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TABLE B—Continued.

Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births, Year Ending December 31, 1901.

COUNTIES.	Grouped Ages of Parents.														Still Births.		Plurality Births.		Illegitimate Births.	
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Reported.							
	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Father.	Father.	Mother.	Male.	Female.	Male.	Female.	Male.	Female.
Adams	5	38	184	259	190	161	99	33	4	.....	1	.....	12	4	4	6	4	2	1	7
Allen	6	79	374	557	443	348	188	79	19	1	9	.....	110	85	21	14	9	5	12	7
Bartholomew	6	52	246	308	198	182	102	36	16	.....	4	.....	7	1	11	6	8	6	5	2
Benton	4	10	88	116	71	67	26	19	4	.....	1	1	41	24	2	.....	.....	.....	.....	.....
Blackford	21	48	234	256	151	111	37	29	4	.....	.....	.....	3	6	3	.....	4	.....	4	5
Boone	6	57	192	261	205	134	60	15	11	.....	1	.....	9	17	7	6	5	5	3	3
Brown	1	34	90	103	60	50	36	13	3	.....	.....	.....	10	.....	3	.....	1	1	2	3
Carroll	4	30	113	141	96	70	34	11	5	.....	.....	.....	4	4	2	.....	3	1	.....	1
Cass	1	19	91	114	137	138	65	35	18	5	4	.....	19	24	.....	.....	3	1	.....	2
Clark	3	34	205	282	185	124	55	19	10	.....	1	.....	9	9	12	9	1	3	6	5
Clay	9	76	311	437	267	215	117	38	21	.....	3	.....	10	2	11	12	10	21	10	6
Clinton	4	48	158	202	153	118	52	16	9	.....	1	.....	23	16	7	5	5	6	2	6
Crawford	116	108	82	90	32	29	20	32	8	3	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Daviess	3	54	264	335	237	214	102	80	20	.....	.....	.....	8	1	12	9	13	5	7	5
Dearborn	4	26	126	166	118	112	64	21	10	.....	.....	.....	9	6	5	.....	1	1	2	2
Decatur	5	37	123	164	129	104	54	18	5	.....	.....	.....	22	15	.....	.....	1	3	1	.....
Dekalb	2	30	168	233	139	87	52	15	5	.....	.....	.....	.....	1	7	3	3	5	1	2
Delaware	17	122	489	567	324	263	123	37	12	.....	1	.....	15	2	.....	1	9	15	7	11
Dubois	2	26	105	214	129	165	64	36	12	.....	.....	.....	131	2	3	1	6	12	1	3
Elkhart	2	37	156	173	126	76	38	38	3	.....	.....	.....	102	103	3	6	5	1	1	.....

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Fayette	15	.....	115	79	65	76	8	16	.....	6	.....	.....	3	29	4	4	2	.....	2	.....
Floyd	1	16	72	95	91	75	27	14	4	.....	1	.....	90	86	4	4	5	9	7	2
Fountain	6	42	114	134	115	90	44	10	8	.....	.....	.....	.....	21	6	2	2	4	5	3
Franklin	2	26	87	116	94	88	58	22	9	.....	.....	.....	9	7	.....	.....	1	3	.....	1
Fulton	3	31	134	154	73	56	35	16	8	.....	2	.....	8	6	4	3	5	3	5	3
Gibson	7	53	225	304	233	210	93	17	17	.....	2	.....	8	1	11	3	10	6	9	4
Grant	19	107	380	494	324	225	108	33	10	.....	.....	.....	33	15	8	8	16	10	5	5
Greene	5	69	209	236	158	126	70	25	9	.....	.....	.....	17	12	12	5	5	3	7	5
Hamilton	5	59	249	291	204	160	77	31	6	.....	2	.....	18	15	12	7	6	4	4	5
Hancock	4	39	167	202	114	96	59	20	9	.....	1	1	4	2	10	2	5	3	4	2
Harrison	1	28	162	201	136	108	43	22	14	.....	.....	.....	9	6	4	2	4	4	3	4
Hendricks	1	36	147	174	121	95	33	13	10	.....	1	.....	5	.....	3	3	5	5	.....	4
Henry	6	58	226	292	226	169	62	22	15	.....	2	.....	18	9	13	7	6	4	8	6
Howard	.....	36	326	291	149	149	33	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Huntington	3	46	220	274	157	114	67	22	6	.....	1	.....	2	.....	3	3	8	4	2	1
Jackson	3	36	219	313	212	160	73	40	28	.....	6	.....	10	2	13	6	15	11	6	6
Jasper	1	27	74	104	81	59	33	12	11	.....	1	.....	23	22	1	5	2	.....	1	1
Jay	8	67	227	315	227	148	69	19	6	.....	3	1	12	4	9	4	9	5	5	4
Jefferson	4	22	93	126	101	87	46	21	7	.....	.....	.....	6	1	1	5	6	6	2	2
Jennings	1	16	85	115	75	58	37	12	3	.....	1	.....	24	25	1	2	6	8	3	1
Johnson	4	23	96	120	83	61	27	13	3	.....	.....	.....	4	.....	2	3	.....	.....	3	3
Knox	6	66	304	428	328	262	126	38	25	.....	3	.....	6	4	11	7	26	16	10	6
Kosciusko	10	50	190	237	160	115	68	21	8	.....	2	.....	10	15	7	3	8	.....	3	7
Lagrange	6	19	88	111	61	52	29	12	7	.....	1	.....	87	85	2	2	.....	8	2	1
Lake	30	121	354	257	72	76	9	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laporte	11	43	283	313	243	224	86	52	8	5	1	.....	8	3	22	13	8	6	3	3
Lawrence	7	47	181	229	144	102	53	22	9	.....	.....	.....	42	36	4	2	3	1	5	10
Madison	27	170	723	907	633	483	207	91	32	1	7	.....	33	10	28	23	6	16	16	12
Marion	26	350	1,542	2,027	1,399	1,069	428	138	55	.....	8	.....	177	51	69	60	37	49	76	75
Marshall	4	40	163	719	139	97	56	23	6	.....	.....	.....	19	8	11	4	6	2	5	3
Martin	3	25	121	147	93	69	42	20	6	2	1	.....	.....	3	.....	.....	.....	.....	.....	.....
Miami	3	43	157	218	152	115	58	12	13	.....	1	.....	16	7	5	7	5	5	3	3
Monroe	2	26	89	127	84	61	34	12	8	.....	2	1	6	.....	2	5	2	.....	3	2
Montgomery	8	56	238	303	231	178	82	37	14	1	.....	1	5	4	8	8	2	6	4	8
Morgan	2	31	130	151	85	63	30	12	5	.....	.....	.....	8	3	1	1	1	1	.....	1
Newton	1	28	88	112	78	68	40	11	5	.....	1	.....	20	14	.....	.....	1	3	2	1
Noble	1	35	160	213	117	106	46	11	5	.....	1	.....	35	.....	.....	.....	.....	3	1	1
Ohio	.....	1	14	25	18	24	22	7	2	1	.....	.....	21	19	.....	.....	.....	.....	.....	.....
Orange	.....	25	107	125	94	82	28	15	8	.....	2	.....	9	1	.....	3	3	1	2	3
Owen	5	22	137	177	106	89	42	16	10	.....	3	.....	3	2	.....	.....	6	2	3	2

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TABLE B—Continued.

COUNTIES.	Grouped Ages of Parents.														Still Births.		Plurality Births.		Illegitimate Births.	
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Reported.							
	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Father.	Father.	Mother.	Male.	Female.	Male.	Female.	Male.	Female.
Parke	9	48	94	92	63	48	37	18	3	.....	.....	.....	7	7	1	1	1	3	1	.....
Perry	5	28	104	149	129	117	57	27	19	.....	.....	.....	9	2	11	6	2	4	4	3
Pike	4	43	138	180	131	101	38	14	15	.....	3	2	13	6	10	6	7	5	7	9
Porter	2	21	81	109	76	67	37	19	16	.....	4	.....	.....	.....	.....	.....	4	2	1	1
Posey	1	40	193	295	222	148	80	25	9	.....	1	.....	3	1	5	2	9	5	2	1
Pulaski	...	6	36	57	35	25	24	14	7	1	.....	.....	5	4	4	1	.....	.....	1	.....
Putnam	4	43	209	278	154	120	67	17	14	.....	1	.....	13	4	12	8	4	8	6	3
Randolph	5	74	226	272	149	119	60	22	9	.....	.....	.....	91	53	3	4	7	7	5	8
Ripley	...	5	30	33	15	19	12	2	1	.....	.....	.....	263	262	4	1	3	1	4	1
Rush	2	29	95	109	85	78	39	13	6	.....	1	.....	1	.....	5	1	.....	2	.....	1
Scott	6	27	73	83	54	31	9	3	1	.....	.....	.....	9	8	4	2	.....	2	.....	1
Shelby	5	43	178	245	182	138	75	26	10	.....	.....	.....	7	5	10	3	2	.....	1	3
Spencer	1	15	66	106	86	76	49	17	6	1	1	.....	20	14	.....	.....	4	2	1	.....
Starke	1	27	85	98	58	56	40	16	10	.....	3	.....	.....	.....	.....	1	1	1	.....	.....
Steuben	2	8	44	55	41	39	22	11	3	.....	.....	.....	4	3	2	1	4	.....	.....	3
St. Joseph	4	44	249	350	263	183	86	31	7	.....	1	1	.....	3	14	8	8	6	2	2
Sullivan	.....	105	197	102	39	61	15	13	2	.....	1	.....	94	67	4	3	.....	.....	.....	.....
Switzerland	2	19	76	95	70	57	31	11	2	.....	.....	.....	14	13	1	1	4	4	1	2
Tippecanoe	1	26	149	194	151	119	36	13	9	.....	2	.....	6	2	6	5	8	4	1	3
Tipton	6	64	164	193	129	87	39	11	7	1	1	.....	13	3	8	4	6	.....	6	3
Union	.....	4	17	22	15	11	7	4	.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	.....
Vanderburgh	8	98	45	841	816	231	230	15	39	.....	4	7	42	6	32	12	13	11	30	19
Vermillion	2	29	108	149	125	98	41	6	4	.....	.....	.....	21	19	8	7	4	4	1	2
Vigo	6	94	377	522	353	271	147	47	26	.....	8	.....	27	10	11	16	10	6	16	10

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Wabash	10	29	168	165	65	54	25	23	9	6	1	.....	96	97	2	.....	.....	.....	.....	.....
Warren	.....	17	50	69	52	46	27	3	3	.....	.....	.....	8	5	1	2	.....	.....	1	1
Warrick	3	106	194	182	114	52	32	2	12	.....	2	.....	60	75	7	2	8	2	1	3
Washington	.....	16	87	137	72	73	42	22	9	.....	1	.....	41	4	.....	.....	2	2	4	3
Wayne	8	61	278	359	246	192	74	21	11	.....	5	.....	17	6	7	7	2	10	7	7
Wells	4	41	209	228	145	111	49	31	2	.....	1	.....	1	.....	1	.....	.....	.....	1	3
White	.....	33	159	215	180	121	49	13	7	.....	.....	.....	1	15	6	6	11	7	1	1
Whitley	2	24	137	147	74	63	26	6	1	.....	.....	.....	2	2	4	4	.....	.....	4	1
Total	575	4,266	16,841	21,855	15,045	11,514	5,573	2,081	888	34	127	16	2,231	1,546	587	408	447	404	394	364

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TABLE C.

Marriages by Months, Color and Nationality, for Year Ending December 31, 1901.

COUNTIES.	1901.												Color.		Nationality.				Not Reported.		Total.
															American.		Foreign.				
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	White.	Colored.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Adams	18	17	15	18	13	24	15	12	24	17	26	24	223	....	217	215	6	8	.....	.....	223
Allen	38	60	28	51	38	77	46	40	58	57	104	62	654	5	586	603	71	51	2	5	659
Bartholomew	21	20	15	20	32	12	19	22	25	20	20	30	253	3	251	252	5	3	.....	1	256
Benton	13	11	4	7	12	6	6	7	5	14	7	10	101	1	100	102	2	.....	.....	.....	102
Blackford	18	14	12	17	4	6	28	15	18	23	17	23	195	.....	179	184	16	10	.....	1	195
Boone	18	14	22	19	17	15	9	17	28	33	16	32	240	.....	238	240	2	.....	.....	.....	240
Brown	10	5	7	7	8	9	5	5	7	9	10	4	86	.....	41	41	.....	.....	45	45	86
Carroll	15	15	15	19	15	9	12	5	17	15	17	15	168	1	168	169	1	.....	.....	.....	169
Cass	28	22	19	26	21	23	14	16	22	41	32	27	288	3	195	191	53	54	43	46	291
Clark	102	95	105	104	120	127	130	90	39	37	50	34	794	239	938	941	16	12	79	80	1,033
Clay	31	30	28	41	24	29	50	26	40	57	37	29	418	4	387	405	35	17	.....	.....	422
Clinton	17	30	23	25	16	18	17	21	20	23	26	30	265	1	264	266	2	.....	.....	.....	266
Crawford	12	9	15	11	9	6	14	9	13	12	17	13	140	.....	114	117	14	17	12	6	140
Daviess	22	18	6	18	15	7	24	18	18	36	24	20	224	2	223	223	2	2	1	1	226
Dearborn	19	22	12	19	18	13	14	16	21	21	18	12	196	9	199	202	6	3	.....	.....	205
Decatur	15	13	14	20	10	14	17	21	17	25	23	18	206	1	206	206	1	1	.....	.....	207
Dekalb	30	17	28	22	13	12	21	21	21	23	24	30	261	1	254	252	8	10	.....	.....	262
Delaware	109	34	25	78	47	31	82	32	27	49	54	53	613	8	611	612	9	8	1	1	621
Dubois	7	11	6	12	13	7	4	14	18	23	17	6	138	.....	136	138	2	.....	.....	.....	138
Elkhart	38	26	24	49	31	43	43	25	36	45	32	22	414	.....	377	341	26	12	11	61	414

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Fayette	12	16	7	9	10	8	6	12	12	11	15	10	125	3	124	125	1	.....	3	3	128
Floyd	28	21	46	27	24	35	31	27	33	27	25	21	315	30	296	302	11	4	38	39	345
Fountain	13	12	27	15	22	18	10	26	19	19	19	21	221	.....	218	220	3	1	.....	.....	221
Franklin	12	7	4	10	17	9	14	13	14	19	13	9	141	.....	138	139	3	2	.....	.....	141
Fulton	16	14	11	13	10	15	10	16	11	17	20	15	168	.....	145	148	3	.....	20	20	168
Gibson	12	18	15	12	19	11	16	18	16	30	18	25	196	14	206	209	4	1	.....	.....	210
Grant	52	45	44	37	38	42	45	47	45	59	46	77	554	23	552	552	21	20	4	5	577
Greene	22	20	23	13	12	18	24	28	23	32	31	46	291	1	249	252	5	1	38	39	292
Hamilton	34	24	22	26	21	24	13	21	17	40	26	32	289	11	290	299	10	1	.....	.....	300
Hancock	21	19	29	15	14	18	12	18	20	21	11	13	199	12	204	207	6	2	1	2	211
Harrison	27	16	13	16	10	8	8	13	18	16	18	18	176	5	181	181	.....	.....	.....	.....	181
Hendricks	26	7	8	19	9	10	11	11	17	24	16	10	165	3	165	166	1	.....	2	2	168
Henry	27	20	20	9	19	20	23	20	26	26	27	27	262	2	260	259	3	1	1	4	264
Howard	14	22	23	17	13	20	15	31	39	37	32	39	297	5	302	302	.....	.....	.....	.....	302
Huntington	19	16	12	12	14	15	28	21	19	23	36	23	232	.....	232	230	.....	2	.....	.....	232
Jackson	19	18	17	19	23	22	15	16	21	25	22	25	240	2	241	239	1	2	.....	1	242
Jasper	19	18	9	12	8	4	17	6	7	17	12	14	143	.....	138	140	5	3	.....	.....	143
Jay	26	13	16	15	11	19	20	20	18	25	21	25	228	1	222	227	7	2	.....	.....	229
Jefferson	.....	.....	.....	19	22	15	15	21	21	28	15	20	171	5	137	139	3	1	36	36	176
Jennings	12	7	10	10	5	7	9	8	11	8	17	10	114	.....	113	113	1	1	.....	.....	114
Johnson	15	20	12	11	8	11	13	14	18	26	19	14	171	10	180	181	1	.....	.....	.....	181
Knox	38	12	8	36	24	37	29	31	28	48	37	32	353	7	348	352	6	2	6	6	360
Kosciusko	26	19	27	21	25	22	23	22	18	24	24	46	297	.....	295	297	1	.....	1	.....	297
Lagrange	10	8	11	8	10	9	4	6	8	11	10	15	110	.....	108	110	2	.....	.....	.....	110
Lake	86	49	70	31	46	40	36	30	40	16	11	18	423	.....	308	340	113	48	2	35	423
Laporte	23	15	11	22	28	27	19	33	41	41	30	28	317	1	258	268	57	45	3	5	318
Lawrence	5	9	14	22	11	7	14	28	13	18	20	19	179	1	180	180	.....	.....	.....	.....	180
Madison	78	79	68	85	90	63	88	78	77	98	89	89	947	35	906	902	73	77	3	3	982
Marion	137	96	86	155	118	119	123	134	84	177	147	86	1,339	123	1,256	1,386	99	69	7	7	1,462
Marshall	15	15	19	29	17	17	13	23	22	27	13	26	236	.....	228	227	8	9	.....	.....	236
Martin	8	17	7	12	9	9	5	8	6	10	11	6	108	.....	87	80	21	28	.....	.....	108
Miami	27	16	15	23	17	15	16	31	17	20	31	38	264	2	258	263	7	2	1	1	266
Monroe	30	18	18	18	12	21	7	12	12	27	15	16	197	9	204	205	1	1	1	.....	206
Montgomery	17	24	22	20	16	21	18	32	29	36	29	47	309	2	254	256	2	.....	55	55	311
Morgan	17	17	8	7	8	9	13	27	23	15	17	16	176	1	177	176	.....	1	.....	.....	177
Newton	16	8	4	5	8	5	6	5	6	11	6	1	76	.....	72	72	4	4	.....	.....	76
Noble	18	13	17	12	12	9	11	12	13	30	17	16	179	1	172	173	7	6	1	1	180
Ohio	5	5	7	2	2	.....	3	2	7	7	5	7	52	.....	52	52	.....	.....	.....	.....	52
Orange	17	8	11	12	15	3	11	17	11	18	14	20	156	1	157	157	.....	.....	.....	.....	157
Owen	50	26	22	16	8	14	34	22	14	20	17	8	251	.....	216	216	.....	.....	35	35	251

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TABLE C—Continued.

COUNTIES.	1901.												Color.		Nationality.				Not Reported.		Total.
															American.		Foreign.				
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	White.	Colored.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Parke	21	14	20	17	16	11	15	16	17	14	24	26	211	....	208	209	3	2	.....	.....	211
Perry	10	15	15	25	27	16	7	19	14	19	24	26	208	9	199	207	16	10	2	.....	217
Pike	18	5	9	17	15	11	6	15	19	14	19	28	175	1	174	176	2	.....	.....	.....	176
Porter	16	13	16	12	17	14	12	19	21	14	16	19	189	.....	160	168	29	19	.....	2	189
Posey	20	34	17	21	18	8	20	24	16	20	16	13	218	9	184	187	3	.....	40	40	227
Pulaski	6	10	9	12	11	5	8	4	3	17	12	10	107	.....	101	106	4	.....	2	1	107
Putnam	13	8	11	19	10	10	13	16	16	20	16	15	164	3	165	167	2	.....	.....	.....	167
Randolph	24	29	19	16	15	16	21	27	29	19	22	30	265	2	267	267	.....	.....	.....	.....	267
Ripley	14	10	15	18	19	12	10	14	10	18	7	24	171	.....	.....	.....	.....	.....	171	171	171
Rush	8	4	13	8	7	13	9	14	12	14	17	10	121	8	129	129	.....	.....	.....	.....	129
Scott	7	7	7	6	3	4	7	5	7	19	8	10	90	.....	90	90	.....	.....	.....	.....	90
Shelby	28	21	18	18	10	11	10	26	21	30	26	23	242	.....	240	242	2	.....	.....	.....	242
Spencer	22	22	18	30	6	18	7	24	14	25	11	14	191	20	208	208	3	2	.....	1	211
Starke	5	12	15	4	7	4	5	2	9	4	8	14	89	.....	78	84	11	5	.....	.....	89
Steuben	18	5	9	13	17	8	15	12	9	22	15	17	160	.....	156	160	4	.....	.....	.....	160
St. Joseph	44	31	16	53	36	23	45	49	23	61	54	20	444	11	358	387	96	68	1	.....	455
Sullivan	19	24	11	9	7	22	12	18	23	24	20	24	212	1	204	208	9	5	.....	.....	213
Switzerland	28	16	12	15	18	8	12	3	8	17	16	15	166	2	168	168	.....	.....	.....	.....	168
Tippecanoe	28	45	24	30	16	34	12	20	24	40	34	19	318	8	300	313	25	12	1	1	326
Tipton	19	24	24	13	11	17	15	9	21	21	29	29	232	.....	231	231	1	.....	.....	1	232
Union	2	5	9	3	2	1	3	5	7	14	2	6	57	2	56	56	1	1	2	2	59
Vanderburgh	93	42	57	51	101	64	60	64	63	65	65	80	725	80	774	786	29	15	2	4	805
Vermillion	13	8	7	18	6	15	10	9	7	17	19	13	140	2	126	130	16	10	.....	2	142
Vigo	45	49	50	49	53	66	52	45	71	62	71	66	653	26	651	662	28	17	.....	.....	679

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Wabash	19	18	23	19	16	39	21	30	42	32	39	38	335	1	336	336	......	......	......	......	336
Warren	7	2	......	8	6	7	5	4	8	9	10	9	75	......	73	75	2	......	......	......	75
Warrick	41	37	24	77	19	10	21	12	17	14	25	17	302	12	263	280	31	11	20	23	314
Washington	13	13	18	17	12	13	15	15	15	6	12	20	169	......	169	169	......	......	......	......	169
Wayne	21	25	36	26	28	38	31	31	22	47	53	38	377	19	379	379	17	13	......	4	396
Wells	31	17	15	33	25	10	10	24	24	25	22	35	271	......	267	270	3	1	1	......	271
White	13	14	15	17	13	7	11	9	30	16	13	21	179	......	......	......	1	......	178	179	179
Whitley	11	13	14	12	11	15	13	12	22	17	16	14	170	......	167	170	3	......	......	......	170
Total	2,257	1,882	1,802	2,141	1,854	1,834	1,906	1,968	2,012	2,520	2,313	2,265	23,970	804	22,794	23,062	1,108	735	872	977	24,774

TABLE D.

Marriages, Grouped Ages, for the Year Ending December 31, 1901.

COUNTIES.	Grouped Ages.																		
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		Over 80.		Not Reported.		Total.
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Adams	3	46	148	136	43	28	21	9	3	.....	1	2	3	1	.....	.....	1	1	223
Allen	4	103	454	444	137	79	36	21	19	9	5	1	3	.....	.....	.....	1	2	659
Bartholomew	3	64	180	148	41	21	18	12	7	5	5	2	.....	.....	.....	.....	2	4	256
Benton	2	24	70	72	20	5	7	.....	2	.....	1	.....	.....	.....	.....	.....	.....	1	102
Blackford	6	55	130	110	34	14	10	6	7	5	3	.....	.....	.....	.....	.....	5	5	195
Boone	9	91	184	126	24	8	2	6	9	3	6	3	5	2	.....	.....	1	1	240
Brown	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	86	86	86
Carroll	10	59	113	91	32	13	8	3	5	2	1	1	.....	.....	.....	.....	.....	.....	169
Cass	6	60	185	179	58	31	19	7	14	8	3	.....	.....	1	1	.....	5	5	291
Clark	9	227	700	609	184	87	38	22	18	7	3	1	.....	.....	.....	.....	81	80	1,033
Clay	9	138	305	230	58	29	33	17	13	5	2	3	2	.....	.....	.....	.....	.....	422
Clinton	10	76	175	140	41	29	21	16	9	1	8	3	2	1	.....	.....	.....	.....	266
Crawford	73	77	43	38	14	15	6	8	4	1	.....	1	.....	.....	.....	.....	.....	.....	140
Daviess	14	79	149	118	33	13	14	11	10	1	3	2	1	.....	.....	.....	2	2	226
Dearborn	5	36	145	129	36	35	12	2	2	.....	1	1	.....	.....	1	.....	3	2	205
Decatur	16	75	129	94	29	19	13	13	12	5	7	1	1	.....	.....	.....	.....	.....	207
Dekalb	4	57	175	158	51	23	13	7	11	11	7	6	1	.....	.....	.....	.....	.....	262
Delaware	21	203	424	322	102	68	51	21	18	5	3	.....	1	.....	.....	.....	1	2	621
Dubois	2	25	103	97	27	13	5	2	.....	.....	.....	.....	.....	.....	.....	.....	1	1	138
Elkhart	5	80	273	262	78	38	32	19	18	13	5	1	2	1	.....	.....	1	.....	414

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Fayette	6	30	79	62	31	14	9	3	2	2	1	.....	.....	.....	.....	.....	.....	17	128
Floyd	7	60	189	189	72	42	26	10	6	6	4	.....	4	.....	.....	.....	38	38	345
Fountain	3	57	149	123	37	23	15	11	13	6	3	1	1	.....	.....	.....	.....	.....	221
Franklin	3	24	93	92	30	18	9	3	2	2	2	1	.....	.....	.....	.....	2	1	141
Fulton	5	43	109	94	31	16	12	8	5	1	1	2	1	.....	.....	.....	4	4	168
Gibson	3	41	149	135	36	22	11	7	7	3	2	2	2	.....	.....	.....	.....	.....	210
Grant	27	182	384	291	96	49	27	34	23	15	12	3	2	.....	.....	.....	6	3	577
Greene	7	111	191	117	35	11	12	10	8	4	.....	.....	.....	.....	.....	.....	39	39	292
Hamilton	7	76	214	179	49	29	15	6	5	3	6	6	2	.....	.....	.....	2	1	300
Hancock	6	43	129	111	47	41	16	10	9	4	2	2	2	.....	.....	.....	.....	.....	211
Harrison	3	40	130	109	29	23	13	4	1	.....	3	2	2	.....	.....	1	.....	2	181
Hendricks	4	46	114	85	27	12	14	9	4	3	5	2	.....	.....	.....	.....	.....	11	168
Henry	5	61	173	149	46	34	18	6	12	10	1	1	7	2	.....	.....	2	1	364
Howard	.....	49	228	179	44	44	15	15	7	7	6	6	2	2	.....	.....	.....	.....	302
Huntington	6	59	159	142	42	18	14	6	5	4	5	1	1	.....	.....	.....	.....	2	232
Jackson	6	57	162	142	45	22	17	12	8	4	4	1	.....	1	.....	.....	.....	3	242
Jasper	3	49	104	74	26	13	3	4	5	2	1	.....	.....	.....	1	.....	.....	1	143
Jay	10	63	160	136	37	18	8	8	7	1	3	1	2	.....	.....	.....	2	2	229
Jefferson	4	52	104	74	21	12	5	.....	3	2	2	.....	2	1	.....	.....	36	35	176
Jennings	4	30	75	63	22	11	10	7	1	2	1	1	.....	.....	.....	.....	.....	.....	114
Johnson	8	39	132	114	25	15	7	10	4	3	4	.....	1	.....	.....	.....	.....	.....	181
Knox	7	93	252	223	60	24	18	11	15	1	.....	.....	.....	.....	.....	.....	8	8	360
Kosciusko	10	76	200	175	52	30	22	9	5	5	4	2	3	.....	1	.....	1	.....	297
Lagrange	.....	33	68	54	26	16	7	4	6	1	2	2	1	.....	.....	.....	.....	.....	110
Lake	10	172	329	227	77	24	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	423
Laporte	2	62	208	208	75	23	15	17	9	4	3	.....	2	1	.....	.....	4	3	318
Lawrence	3	70	127	81	29	16	10	5	5	3	4	2	1	.....	.....	.....	1	3	180
Madison	25	270	665	528	180	114	65	45	26	15	7	5	9	1	.....	2	5	2	982
Marion	24	236	893	931	367	198	109	63	46	20	17	6	3	1	.....	.....	3	7	1,462
Marshall	7	73	162	129	35	17	16	9	7	2	5	4	4	2	.....	.....	.....	.....	236
Martin	.....	21	75	60	15	12	6	2	4	2	1	1	1	.....	.....	.....	6	10	108
Miami	3	66	181	163	63	27	12	5	5	2	1	3	1	.....	.....	.....	.....	.....	266
Monroe	10	60	145	102	28	19	8	10	7	4	6	1	.....	.....	.....	.....	2	10	206
Montgomery	.....	60	175	149	52	29	16	14	11	3	2	1	.....	.....	.....	.....	55	55	311
Morgan	5	62	116	76	31	27	12	4	4	4	6	2	2	1	.....	.....	1	1	177
Newton	1	22	54	49	18	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	76
Noble	5	45	127	117	36	10	6	3	2	3	2	1	.....	1	2	.....	.....	.....	180
Ohio	.....	13	27	29	19	9	3	.....	2	.....	.....	.....	.....	.....	.....	.....	1	1	52
Orange	7	38	99	96	34	14	9	4	5	4	1	.....	2	.....	.....	.....	.....	1	151
Owen	3	48	125	96	26	14	3	3	2	3	2	2	3	.....	.....	.....	87	85	257

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TABLE D—Continued.

COUNTIES.	Grouped Ages.																		Total.
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		Over 80.		Not Reported.		
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Parke	7	64	156	117	34	19	7	6	3	1	4	3	.....	.....	.....	.....	.....	1	211
Perry	8	61	139	108	42	34	14	10	8	4	5	.....	1	.....	.....	.....	.....	.....	217
Pike	8	53	114	95	32	17	10	7	6	1	2	2	3	.....	.....	.....	1	1	176
Porter	1	22	127	135	38	21	14	7	6	3	.....	.....	2	1	1	.....	.....	.....	189
Posey	6	62	166	130	28	23	13	6	6	2	4	1	2	1	.....	.....	2	2	227
Pulaski	2	42	85	56	11	5	6	3	1	.....	2	1	.....	.....	.....	.....	.....	.....	107
Putnam	2	48	120	88	22	16	11	9	6	5	4	1	2	.....	.....	.....	.....	.....	167
Randolph	16	77	193	156	35	19	11	11	8	1	3	2	1	.....	.....	.....	.....	1	267
Ripley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	171	171	171
Rush	1	33	82	65	28	20	9	5	2	5	6	1	1	.....	.....	.....	.....	.....	129
Scott	1	30	73	52	8	4	.....	1	2	3	4	.....	.....	.....	.....	.....	2	.....	90
Shelby	3	70	173	133	40	26	12	7	6	3	5	1	.....	1	2	.....	1	1	242
Spencer	2	59	141	121	43	15	13	8	6	6	3	1	2	.....	.....	.....	1	1	211
Starke	1	35	57	42	17	5	5	2	4	5	3	.....	1	.....	1	.....	.....	.....	89
Steuben	3	41	99	79	30	16	7	13	10	6	7	4	4	1	.....	.....	.....	.....	160
St. Joseph	3	110	324	283	93	40	24	16	6	5	5	1	.....	.....	.....	.....	.....	.....	455
Sullivan	4	85	159	101	38	22	8	4	4	1	.....	.....	.....	.....	.....	.....	.....	.....	213
Switzerland	2	50	127	99	25	9	9	6	4	1	.....	2	1	.....	.....	.....	.....	1	166
Tippecanoe	2	56	237	221	60	31	13	7	7	5	5	2	1	.....	.....	.....	1	4	326
Tipton	28	112	151	94	35	12	9	8	5	1	1	.....	.....	.....	.....	.....	3	5	232
Union	1	13	37	35	13	6	3	2	2	1	1	.....	.....	.....	.....	.....	2	2	59
Vanderburgh	11	113	110	590	587	45	61	15	18	4	5	1	5	.....	.....	.....	8	37	805
Vermillion	3	51	104	74	23	9	5	4	5	2	2	1	.....	.....	.....	.....	.....	1	142
Vigo	14	172	447	391	145	76	45	27	16	12	8	.....	4	.....	.....	.....	.....	1	679

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Wabash	14	58	237	217	49	38	21	16	12	4	2	1	.....	.....	.....	.....	1	2	336
Warren	3	22	55	40	11	11	4	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
Warrick	4	105	210	136	60	33	24	11	8	.....	.....	.....	.....	.....	.....	.....	8	29	314
Washington	9	58	95	60	19	16	8	4	4	3	5	1	.....	.....	2	.....	27	27	169
Wayne	8	86	276	234	66	48	28	18	11	5	4	4	2	.....	.....	.....	1	1	396
Wells	14	72	196	170	46	18	7	5	6	2	1	3	1	.....	.....	.....	.....	1	271
White	2	36	105	102	38	23	18	9	6	5	8	1	2	.....	.....	.....	.....	3	179
Whitley	8	48	117	97	31	13	7	5	3	5	2	2	2	.....	.....	.....	.....	.....	170
Total	651	6,251	16,052	13,977	4,840	2,371	1,406	848	672	342	296	128	121	23	11	3	725	831	24,774

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REVIEW OF MORTALITY STATISTICS

AND OF

PROGRESS IN STATE MEDICINE.

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MORTALITY STATISTICS.

Correct mortality statistics have been collected by the State Board of Health since October 1, 1899, and published monthly with analysis. Up to January 1, 1901, the statistical year ended September 30 of each year. From January 1, 1901, the statistical year will correspond with the calendar year.

Diagram I gives a graphic presentation of the causes of death.

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DIAGRAM SHOWING THE PRINCIPAL CAUSES OF DEATH FOR THE YEAR ENDING DECEMBER, 1901, IN THE ORDER OF THEIR IMPORTANCE.

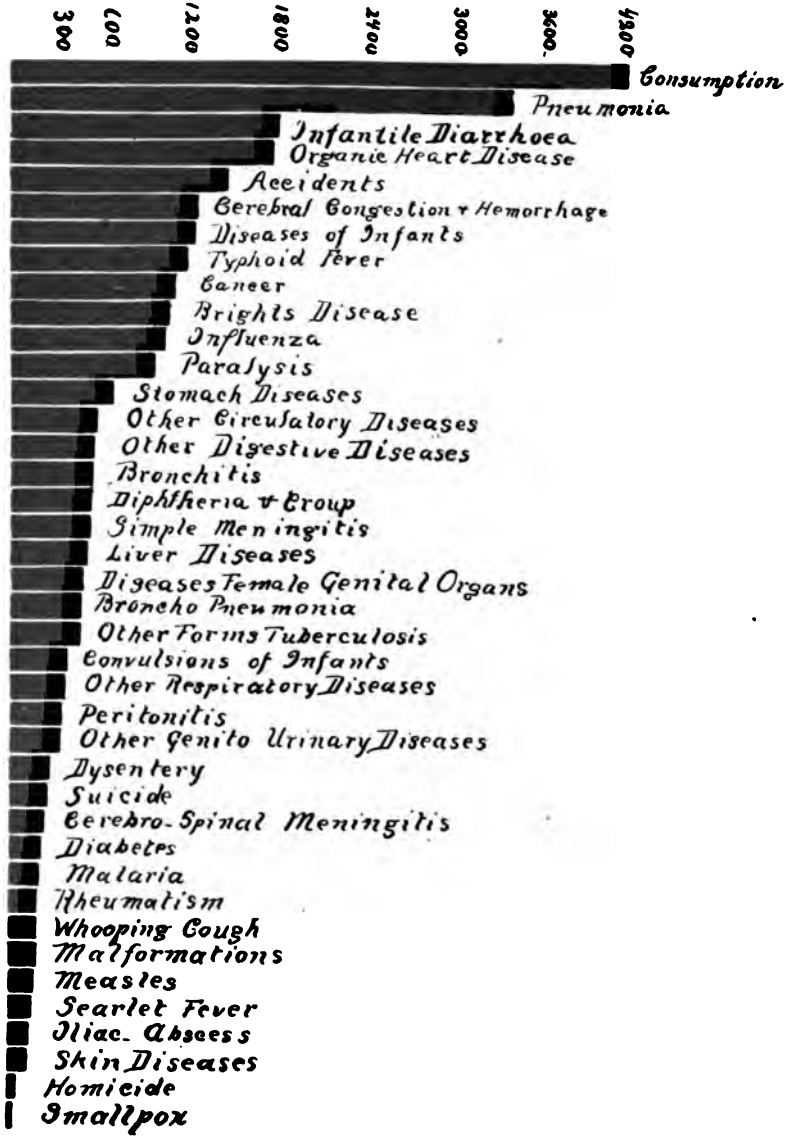


DIAGRAM I.

The total number of deaths reported for the year was 36,541, making a rate for the State of 14 per 1,000 per year. The city death rate was 15 and the country 13.5. From important causes we have to record as follows:

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Disease.	Number Deaths.	State Rate, 100,000.	City Rate, 100,000.	Country Rate, 100,000.
Pulmonary tuberculosis	3,164	125.7	152.1	112.3
Other forms tuberculosis	1,277	50.7	46.2	53.0
Typhoid fever	1,431	56.8	48.6	61.0
Diphtheria	666	26.4	33.6	22.8
Scarlet fever	152	6.1	6.4	5.8
Measles	85	3.4	3.8	3.1
Whooping cough	287	11.5	11.8	11.2
Pneumonia	2,644	110.0	126.0	94.3
Diarrhœal diseases	2,047	81.6	85.0	78.2
Cerebro-spinal meningitis	377	19.1	31.9	6.3
Influenza	426	16.4	15.4	17.5
Puerperal fever	172	6.3	5.0	7.6
Cancer	1,034	44.9	56.8	33.0
Violence	1,536	60.2	58.1	62.4

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TUBERCULOSIS.

DIAGRAM SHOWING DEATHS FROM PULMONARY TUBERCULOSIS, BY AGES, YEAR ENDING DECEMBER, 1901.

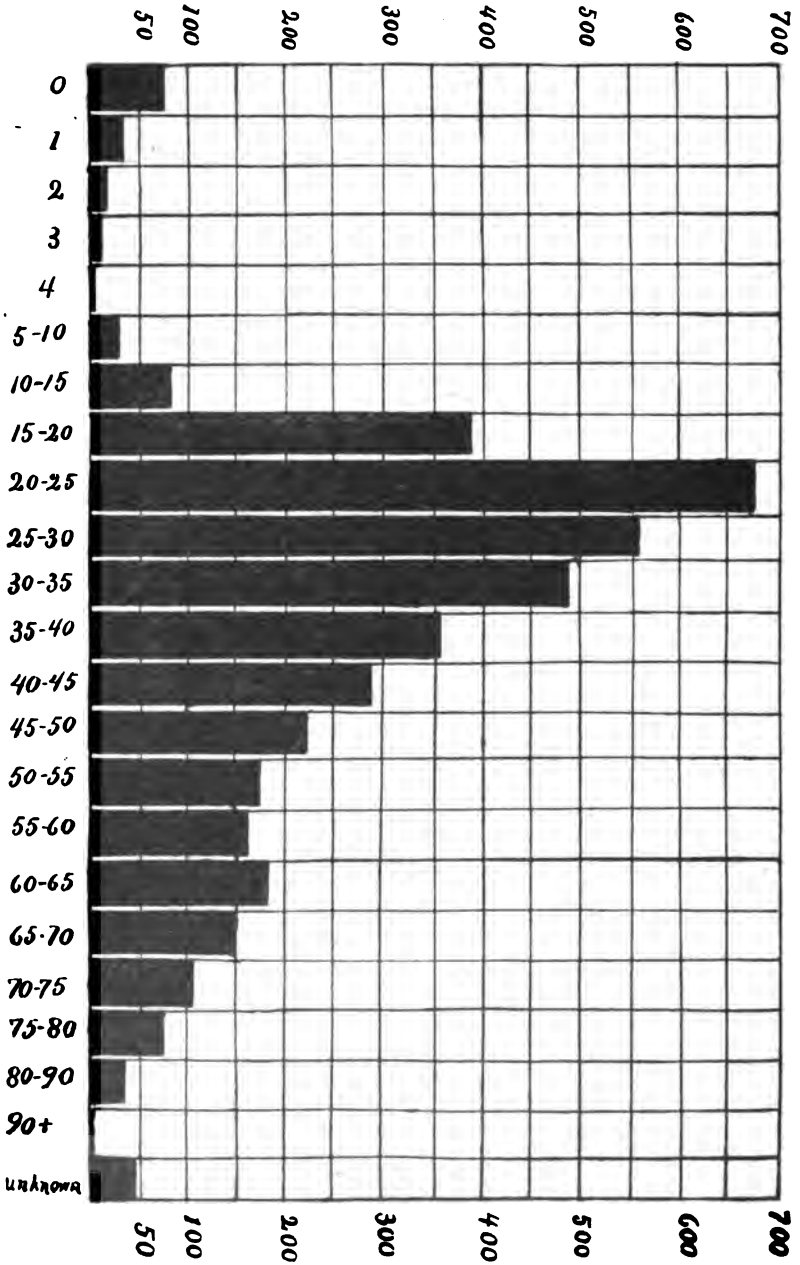


DIAGRAM II.

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The terrible slaughter annually caused by tuberculosis makes it always in order to discuss the prophylaxis of the scourge. In our last report it was calculated that 1900 would record 4,584 deaths from tuberculosis, and so to be depended upon is this disease to keep up its rate, that we have to record 4,441. In order that Indiana may be abreast of the times, and in order that a duty would be performed, it would be well for the Indiana State Medical Society to take pronounced action and recommend to the people and the Legislature prompt and positive action for the prevention of tuberculosis. Many European countries and many States are acting energetically in preventive lines against this disease. The International Congress for the Study of the Best Way to Combat Tuberculosis as a Disease of the Masses, convened at Berlin May 24-27, 1899. This congress was largely attended from all civilized quarters of the globe, and much important work was accomplished. Among the movements taken was the offer of 4,000 marks for the best essay on the subject "Tuberculosis as a Disease of the Masses and How to Combat It." The competition was open to the world and the prize was won by an American citizen, Dr. S. A. Knopf, of New York. It seems there is no better way to bring this matter before the people and the law-making power than for this society to secure, if possible, from state or private sources, a reward for the best essay upon "Tuberculosis Prevention in the State of Indiana."

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DIAGRAM SHOWING DEATHS FROM PULMONARY TUBERCULOSIS, BY MONTHS, YEAR ENDING DECEMBER, 1901.

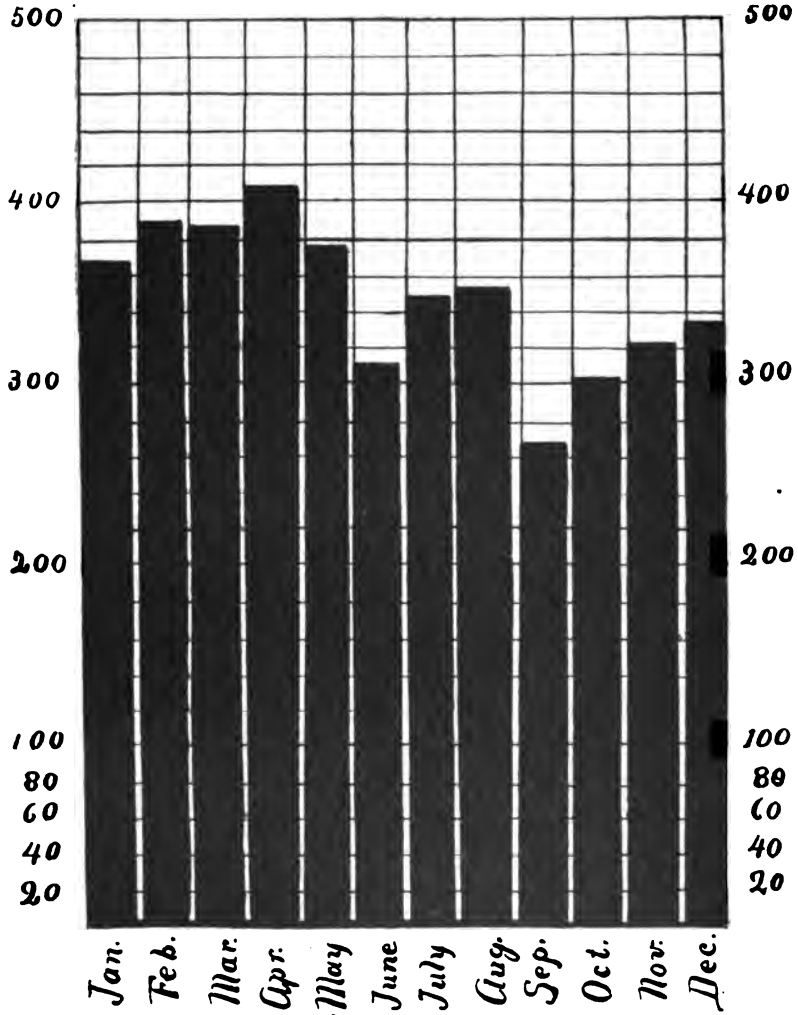


DIAGRAM III.

This being done, the society might each year continue its efforts for prevention, and thus finally start the public into action. It is true that the people, though believing that "An ounce of prevention is worth a pound of cure," will not pay for prevention but will pay liberally for cure; but medicine is a science and its practitioners fully realize that the development of medicine as a science is the true goal of their ambition. The money of it must certainly

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DIAGRAM SHOWING DEATHS FROM TUBERCULOSIS, NOT PULMONARY, BY AGES, YEAR ENDING DECEMBER, 1901.

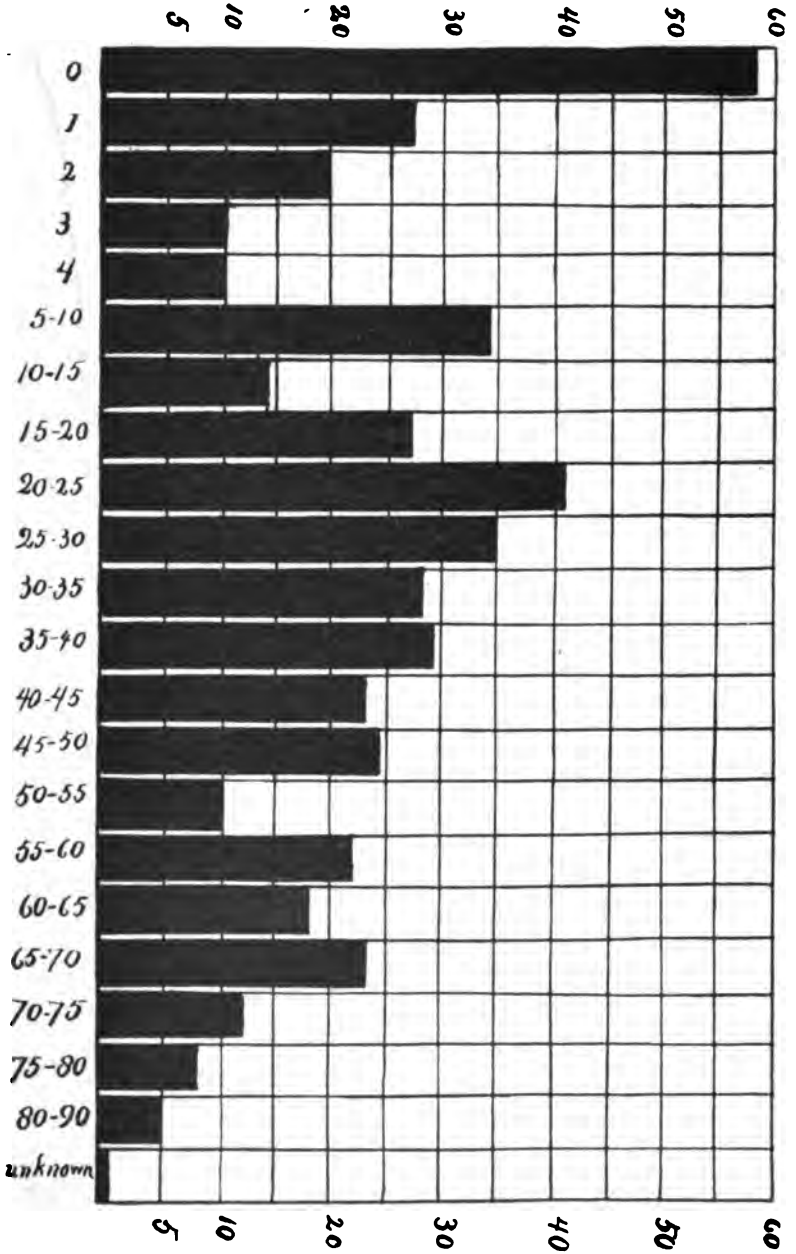


DIAGRAM IV.

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be looked after, but the first consideration is the science of it. Besides, it is plain that whatever uplifts or benefits the masses will also uplift and benefit the practice of medicine. Indiana should have private and public sanatoria for consumptives. It is plainly the duty of the State to take care of indigent consumptives, and this is being done in an extravagant manner in poorhouses and by outdoor township relief. This method propagates the disease, for there is no constant, intelligent teaching of the patients how to care for the infection proceeding from them. The request of the State Board of Health to the Ways and Means Committee of the last Legislature, that a small specific sum be appropriated to make a special fight against consumption, typhoid fever and diphtheria, was refused. The members evidently did not understand the humanity, economy and true statesmanship which the work involved. This, future Legislatures must be made to understand, and this society can accomplish such an end.

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TYPHOID FEVER.

DIAGRAM SHOWING DEATHS FROM TYPHOID FEVER, BY AGES, YEAR ENDING DECEMBER, 1901.

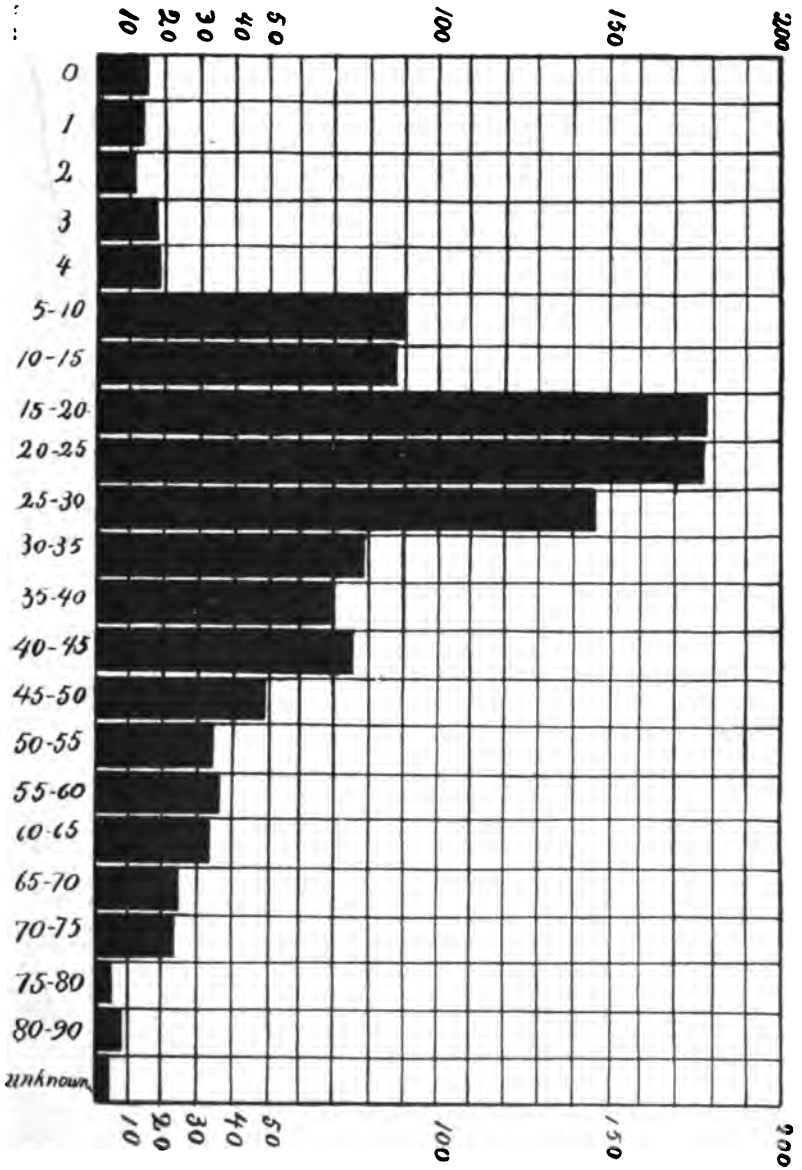


DIAGRAM V.

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The total deaths from this disease for the year was 1,431, a rate of 56.8 per 100,000 annually. It is safe to say that for each death there were fifteen cases, making 21,465. Of this number of deaths, 784, or 54.7 per cent. of the whole number, was of persons between 15 and 35 years. Such unnecessary slaughter of people in the prime of life is a subject worthy of the attention of this society.

DIAGRAM SHOWING DEATHS FROM TYPHOID FEVER, BY MONTHS, YEAR ENDING DECEMBER, 1901.

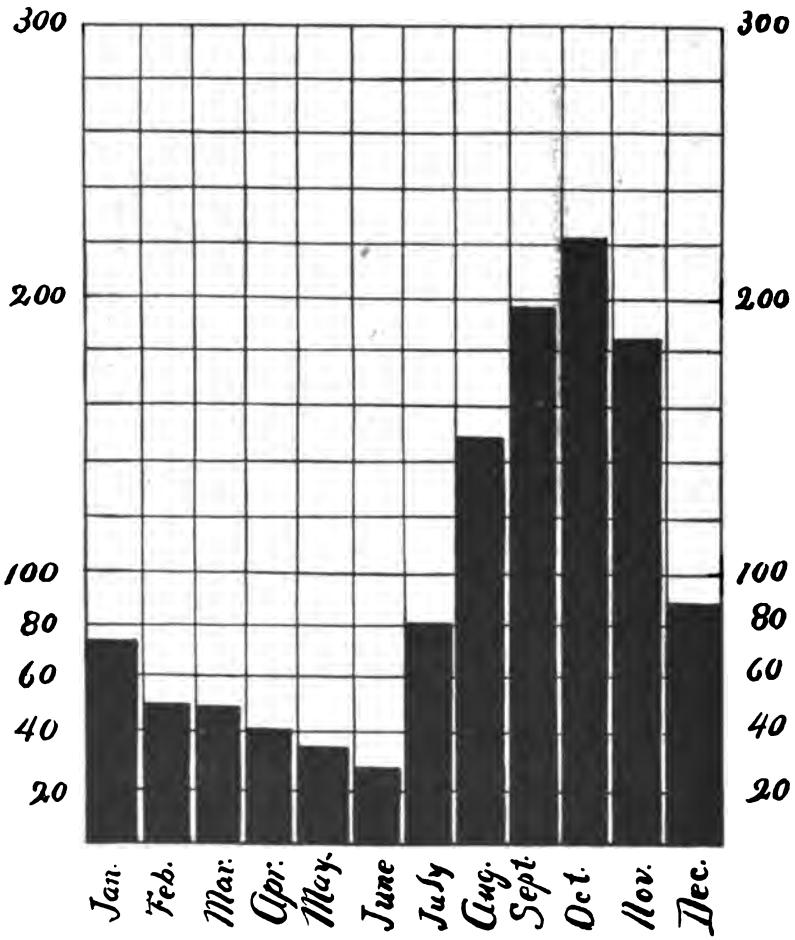


DIAGRAM VI.

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DIPHTHERIA.

DIAGRAM SHOWING DEATHS FROM DIPHTHERIA AND CROUP, BY MONTHS, YEAR ENDING DECEMBER, 1901.

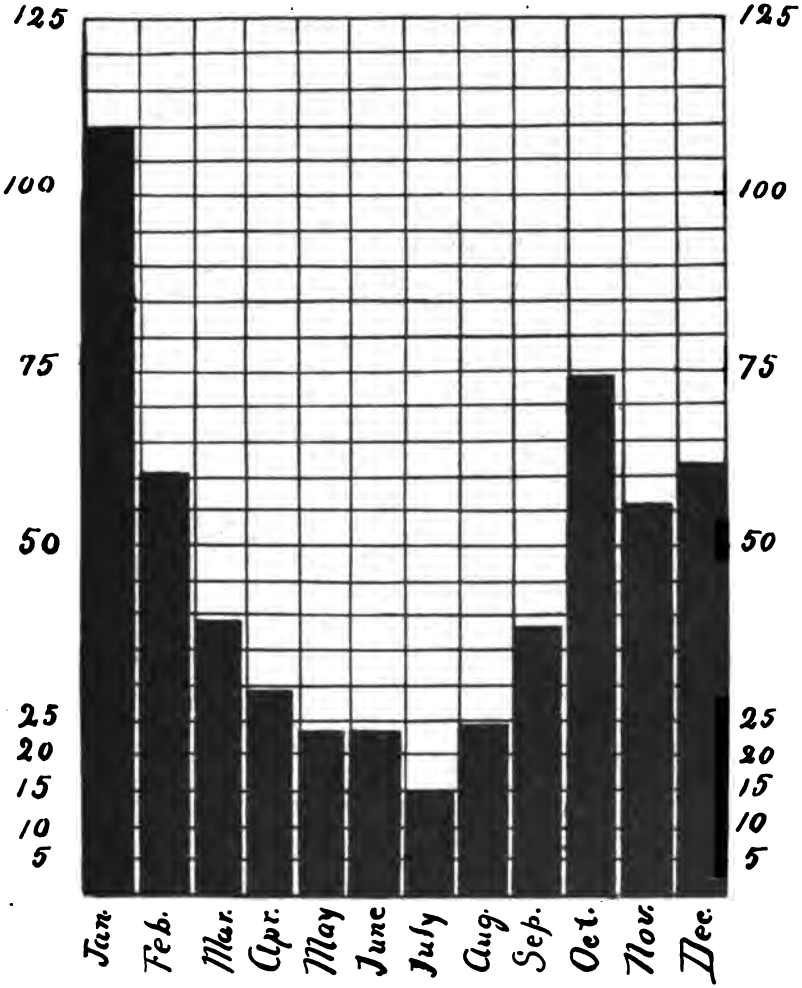


DIAGRAM XII.

Seven hundred and forty-five deaths were reported during the year from diphtheria. The deaths run according to months as follows: January, 90; February, 70; March, 68; April, 30; May, 14; June, 13; July, 15; August, 40; September, 64; October, 111; November, 125; December, 105. There is no marked decrease in the mortality from diphtheria in the last year over the preceding year, as appears from a comparison of the months of

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October, November and December of the years 1899 and 1900. During these periods accurate death returns were secured, and hence bear comparison. For the first period there were reported 347 diphtheria deaths, and for the second, 341. This is a decrease of 1.7 per cent. only. Presumably antitoxine was more freely used in the last period, but such is not apparent in the figures.

DIAGRAM SHOWING DEATHS FROM DIPHTHERIA AND CROUP, BY AGES, YEAR ENDING DECEMBER 1901.

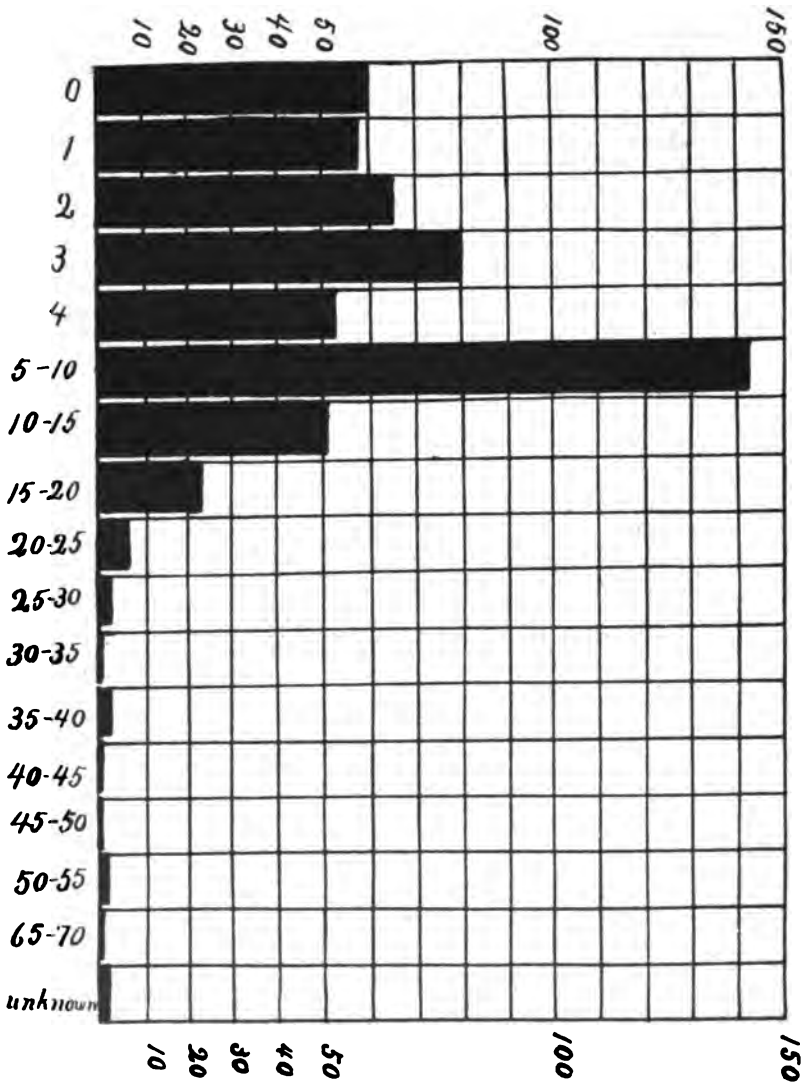


DIAGRAM VIII.

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INFANTILE DIARRHŒA.

DIAGRAM SHOWING DEATHS FROM DIARRHŒAL DISEASES, UNDER FIVE YEARS OF AGE, BY MONTHS, YEAR ENDING DECEMBER, 1901.

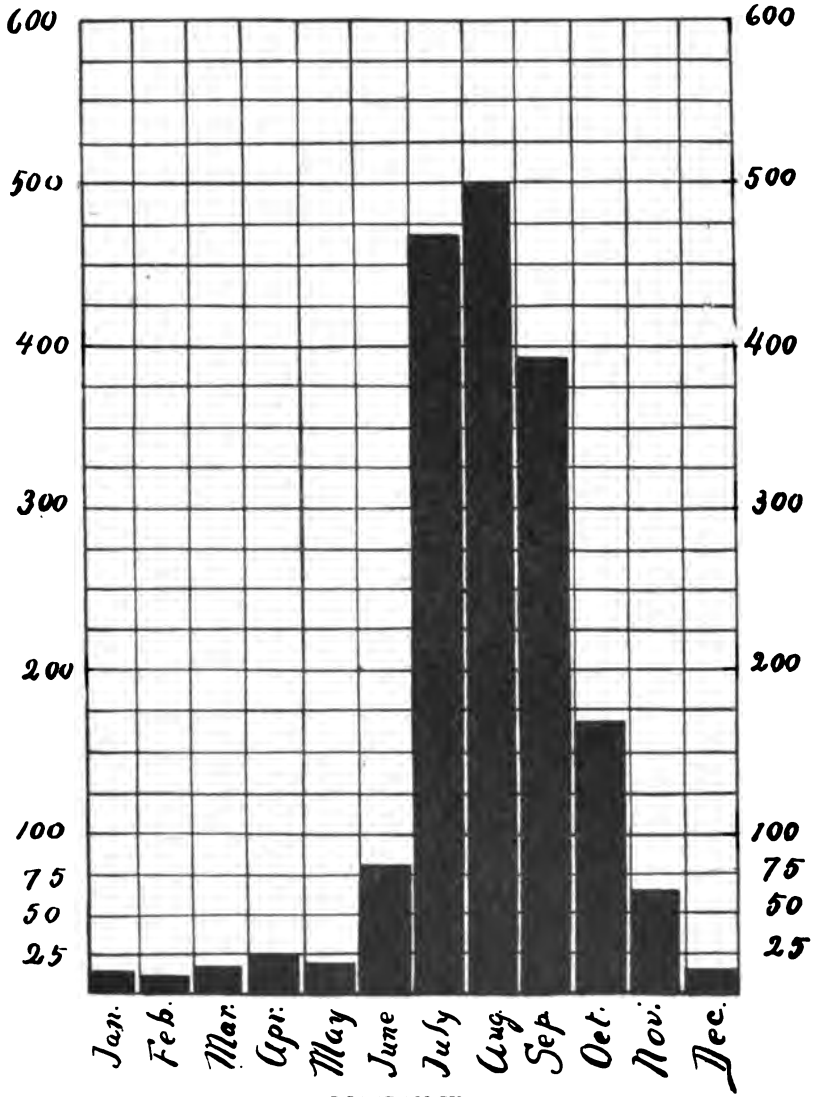


DIAGRAM IX.

Infantile diarrhœa, under which term is included cholera infantum and like disturbances of the intestinal tract, is one of the most destructive of the preventable maladies. The deaths reported

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from this cause in 1900, numbered 2,049. Of this number 1,276 were under 1 year of age, 564 under 2 years, 140 under 3 years, 39 under 4 years and 30 under 5 years. As this cause of disease and death is due almost wholly to poisonous food and water, it is deplorable that the poisoning can not be immediately stopped.

DIAGRAM SHOWING DEATHS FROM DIARRHŒAL DISEASES, BY AGES, YEAR ENDING DECEMBER, 1901.

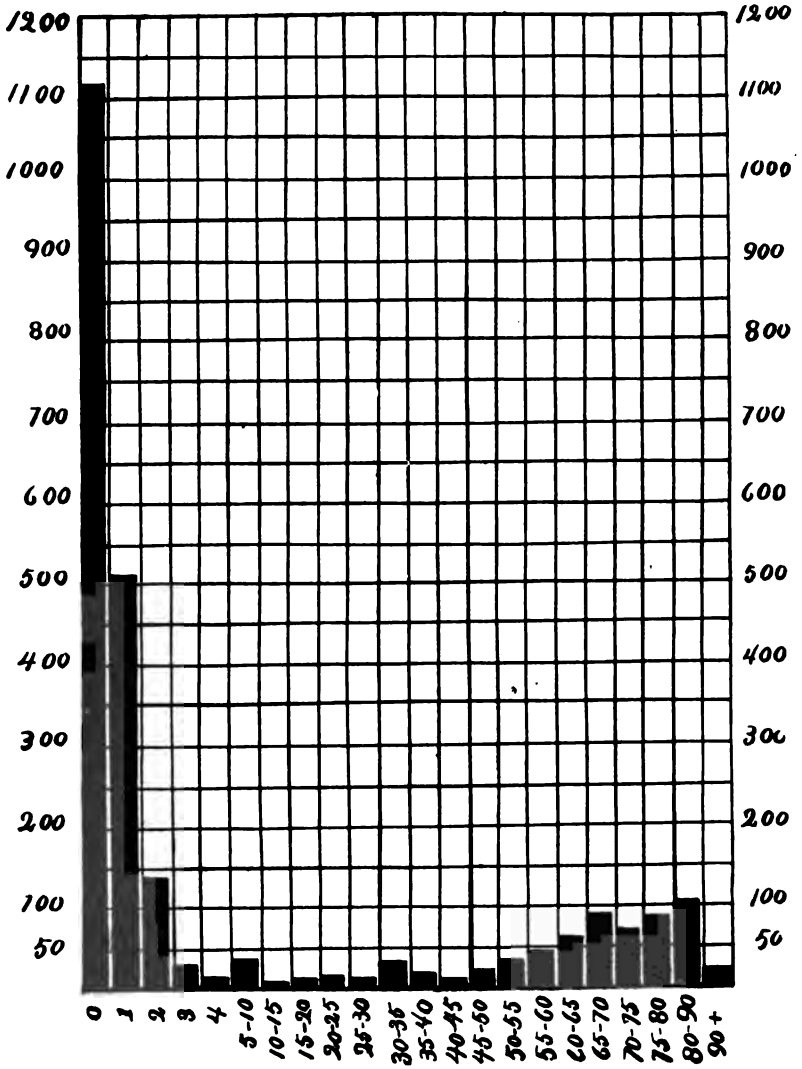


DIAGRAM X.

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CANCER.

In our last report it was shown that the then existent rate showed there would be 920 deaths from cancer in the coming year. The actual figure is 1,034, a rate of 60.2 per 100,000 for the State; the city rate being 58.1, and the country, 62.4. It is true, therefore, that for this year, cancer has destroyed almost as many as diphtheria and influenza combined; and also almost as many as scarlet fever, cerebro-spinal meningitis, whooping cough, measles and puerperal fever. It is a great pity that no prophylaxis is known for cancer.

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PNEUMONIA.

DIAGRAM SHOWING DEATHS FROM PNEUMONIA, BY MONTHS, YEAR ENDING DECEMBER, 1901.

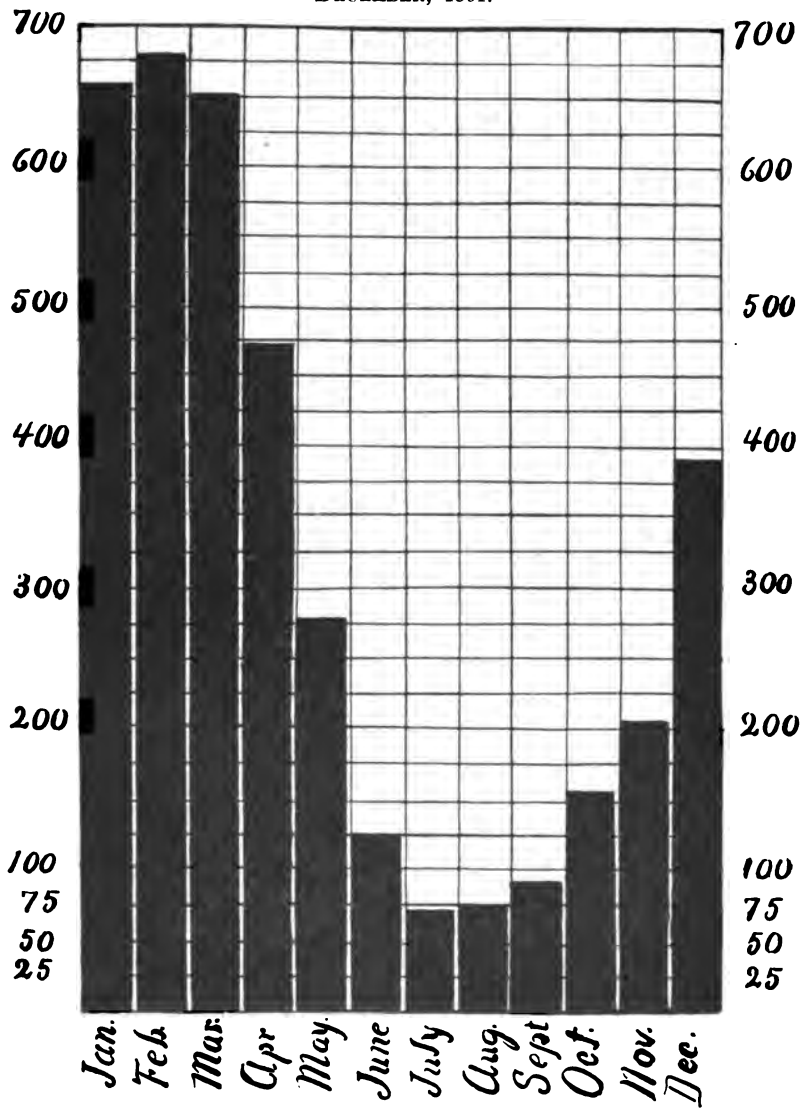


DIAGRAM XI.

This infectious disease stands next in destructiveness to tuberculosis, as 2,644 are credited to it for the last year. It seemed to be the consensus of opinion in the Section of Hygiene of the American Medical Association, at Columbus, that pneumonia most fre-

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quently had a history of overeating and drinking and after exposure to vitiated air.

DIAGRAM SHOWING DEATHS FROM PNEUMONIA, BY AGES, YEAR ENDING DECEMBER, 1901.

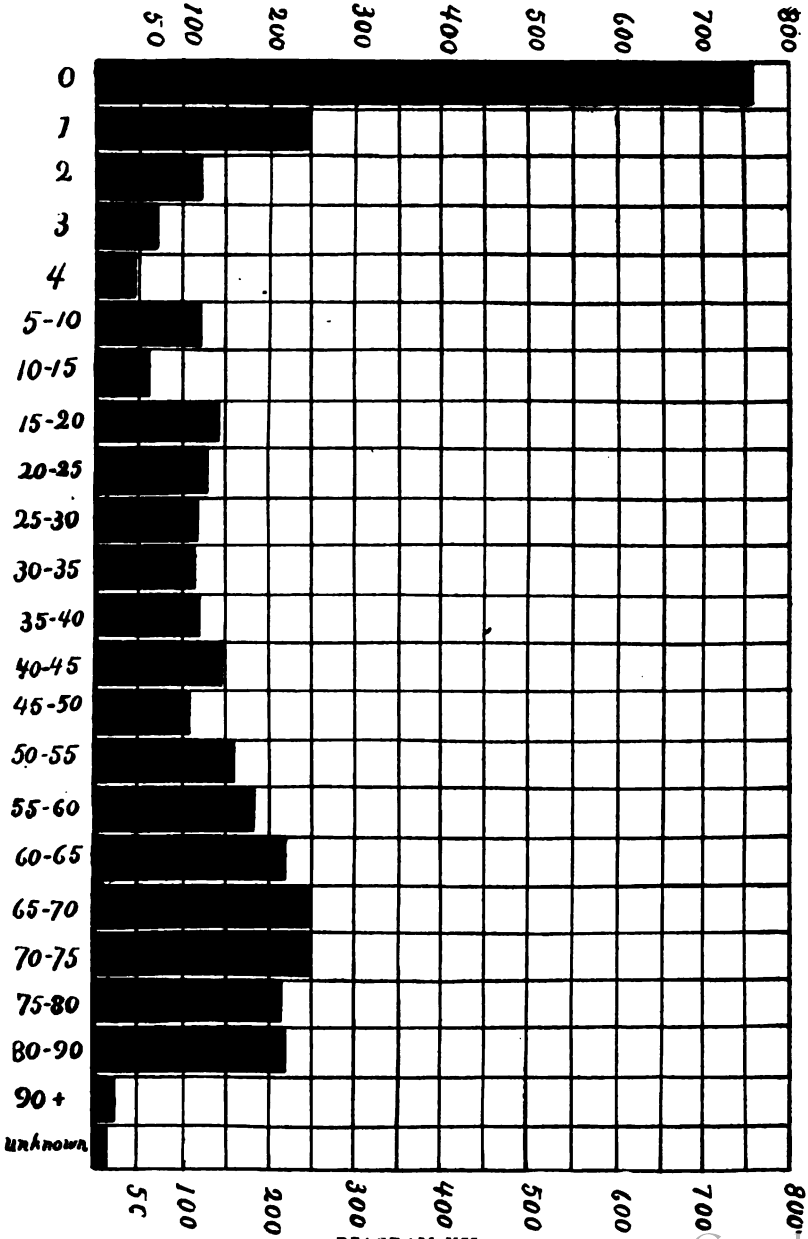


DIAGRAM XII.

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INFLUENZA.

DIAGRAM SHOWING DEATHS FROM INFLUENZA, BY MONTHS, YEAR ENDING DECEMBER, 1901.

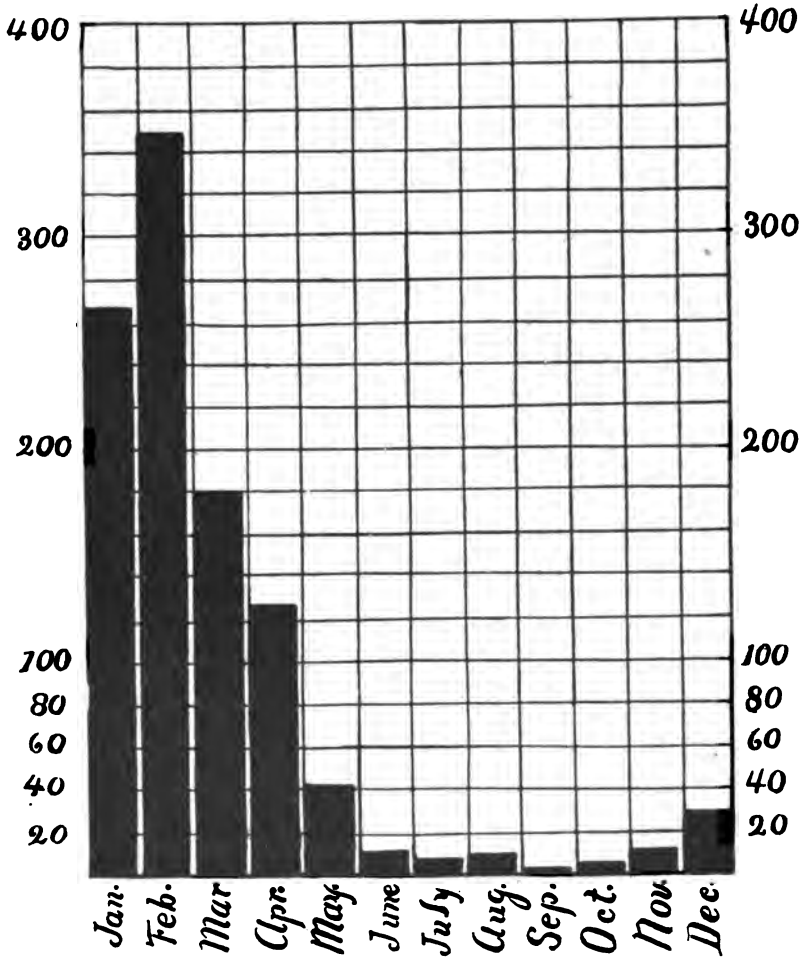


DIAGRAM XIII.

Lagrippe no longer calls forth jokes from the people and the press. It is now known to be a highly dangerous disease. This malady has been widespread the past fall and winter. It has been reported by every one of the 700 odd Health Officers and deputies. The deaths numbered 426 in the year. This makes a State rate of 16.4 per 100,000, a city rate of 15.4 and for the country, 17.5.

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DIAGRAM SHOWING DEATHS FROM INFLUENZA, BY AGES, YEAR ENDING DECEMBER, 1901.

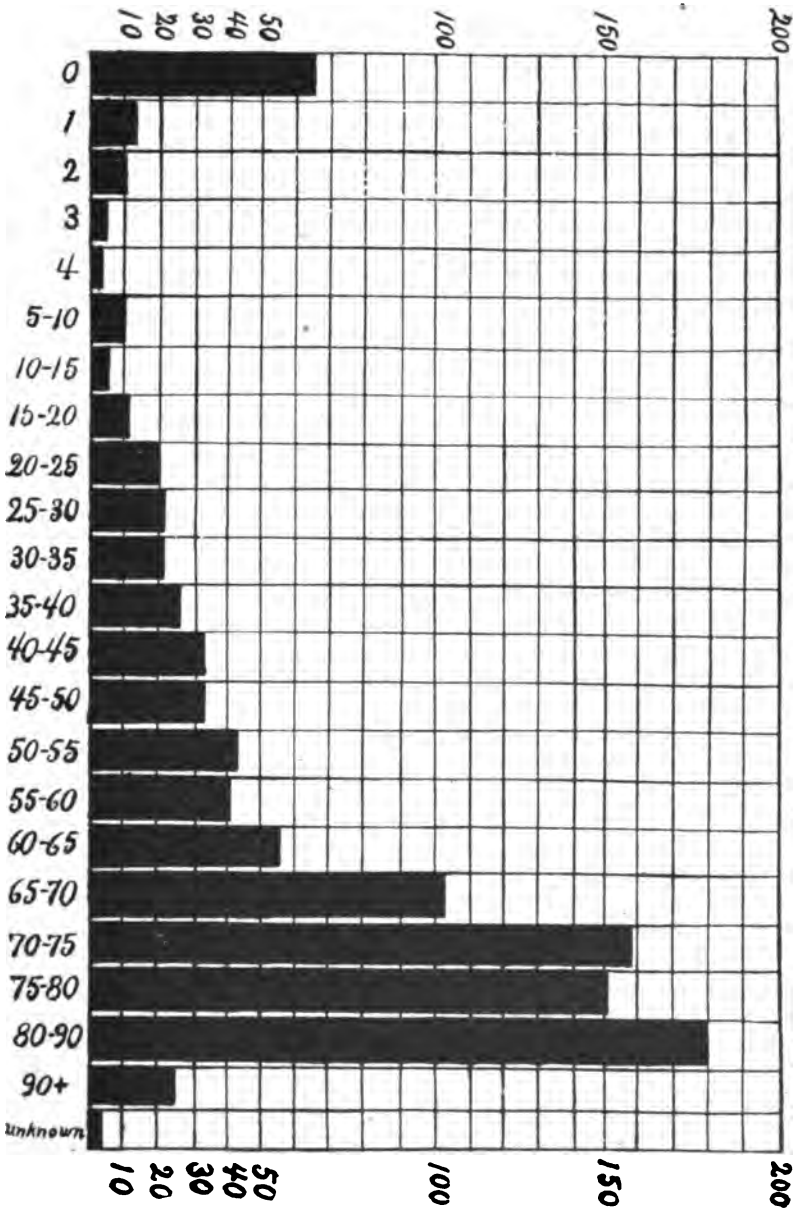


DIAGRAM XIV.

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Influenza has apparently become domesticated with us. Its restriction seems possible, if early recognized. Positive early recognition may be highly favored by bacteriological examination, and great is the pity that for this and other diagnostic work, the last Legislature denied the State Board of Health a Laboratory of Hygiene.

SMALLPOX.

Since our last report smallpox has been constantly present in the State. The number of cases reported to date from January 1st, was 967. The deaths numbered 8, two in January in Allen County, five in March, as follows: Allen County, 1; Dekalb County, 1; Madison County, 1; Tipton County, 1; Daviess County, 1. April, Marion County, 1. Very few counties have escaped having the disease. At new points of outbreak there is almost always trouble in making people believe that smallpox exists. This is because almost every community supports one or more practitioners who have never seen smallpox and stand ready to deny the disease is present. Business men are prone to look upon a correct diagnosis as inimical to business interests. They frequently are slow to realize that the disease must be attacked and put out, and that it will not stop with the denying of its existence. The physician or Health Officer who tells the truth is quite apt to be abused for the favor he has done, and the abuse becomes permanent, if, perchance, the disease is prevented from spreading, because this fact is then pointed to as proof the disease was not smallpox.

The statement is often heard from those who deny that the present epidemic eruptive disease is smallpox, that vaccination does not protect against it and that it does not prevent vaccination from running a typical course. This may be true in a few instances, as we all know, but it is very rare, and as a matter of fact, there is yet to be found a single well-trained, well-educated practitioner who will testify to actual experience to the effect as stated above.

It seems that some advance has been made in determining the cause of vaccinia and variola. Funck (Deutsch Med. Woch. February 28, 1901) states that the protozoa described years ago by Pfeiffer and others, have the greatest number of points in their

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favor as the cause. Funck gives new details concerning the morphology of the protozoa and contributes some additional points concerning the method of demonstrating and spreading them. He says: "The individual organisms are small and range from one to three microns in diameter, large cystlike bodies, which have a diameter as great as 25 microns, were often to be seen, and these were filled with spores."

A culture, in a bacteriological sense, of these protozoa can not be made, but Funck states that he took so-called sterile lymph which contained only a small number of protozoa, and was therefore much more readily examined than the contents of pustules, smeared this lymph over the surface of an ordinary agar plate and placed it in the thermostat for twenty-four hours. Examination at the end of this time, by means of a low power of microscope, enabled him to pick out the large spore-containing cysts with readiness, and by means of a fine platinum needle he isolated these cysts and used them for purposes of injection. The injections produced what he believed was a typical vaccinia and, after suffering from this disease, the animals were immune to inoculation directly from vaccinia pustules. He states that the protozoa can, by his more complete and accurate methods of examination, be found in all vaccinia pustules and in the immediately surrounding tissues, and he considers that their constant presence in the disease, together with the fact that injection of the isolated sporoblasts produces typical vaccinia, demonstrates conclusively that they are the cause of vaccinia. He was also able to find protozoa of identical appearance in a case of variola, and concludes from this that the two diseases are due to the same cause, differences in the virulence of the protozoa being the cause of the variations in the results of infection produced by them. It has been quite thoroughly established that cowpox is actually a modified form of smallpox, and one can not reasonably object to Funck's conclusion that variola and vaccinia are due to the same cause.

We have for the first time to make mortality comparisons of the three sections of the State. These sections are divided into the Northern, Central and Southern Sanitary Sections and are the same as are adopted by the United States Weather Service for weather comparisons. By referring to the chart it will be observed

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that the Southern Sanitary Section had, during the year, the highest death rate for consumption, typhoid fever, diphtheria and diarrhoeal diseases. In scarlet fever, the Central Sanitary Section had the highest rate. This plainly indicates that much sanitary work is necessary in the Southern Section in order to make it compare in healthfulness with the other two sections. The Northern Section has the lowest rate for consumption, typhoid fever, scarlet fever and diarrhoeal diseases. The diphtheria rate of the sections stands in the following order: Central, 17.2; Northern, 20.1; Southern, 21.6. A careful study of this map by health officers is warmly recommended.

STATE MEDICINE.

Of the laws relating to State Medicine existant in this State, only the medical law has been amended since the 1900 report of this committee. The amendments are thus described by Dr. W. N. Wishard in the May number of the Indiana Medical Journal:

"The law recently passed by the Indiana Legislature amends the laws passed in 1897 and 1899. The first section provides for larger powers on the part of the State Board of Medical Registration and Examination in revoking licenses that have been obtained by misrepresentation or fraud and gives the Board more direct power in enforcement of the law through the prosecuting attorneys of the various counties. It also provides that all persons applying for license shall submit to a written examination as to their qualifications to practice medicine, and, in order to be eligible for examination, it is required that all applicants hereafter shall be graduates of medical colleges that maintain the standard prescribed by the Board. Heretofore the Board, under the advice of the Attorney-General, has permitted all applicants to submit to a State examination who were not graduates of medical colleges, as the old law was not sufficiently specific upon this point. The standard for medical colleges adopted by the Board is that fixed by the American Medical College Association. An exception is made in favor of those who have matriculated in reputable medical colleges within the State of Indiana prior to January 1, 1901, and whose applications shall be filed prior to January 1, 1905. The Board is author-

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ized to grant new applicants temporary permits which authorize them to practice medicine until the next regular meeting of the Board, at which time applications can be finally decided upon.

"Section 2 of the law provides for the printing of 3,000 copies of the annual report of the Board in the same manner as the reports of the State Board of Health are printed.

"Section 3 defines the practice of medicine, and this section is the one which met with the most bitter opposition on the part of the Christian Scientists and others opposed to the bill. The courts can certainly not make an error in determining what constitutes the practice of medicine if they read this section. It is of such importance that we give it verbatim: 'To open an office for such purpose or to announce to the public in any way a readiness to practice medicine in any county of the State, or to prescribe for, or to give surgical assistance to, or to heal, cure or relieve, or to attempt to heal, cure or relieve those suffering from injury or deformity, or disease of mind or body, shall be to engage in the practice of medicine within the meaning of this act: Provided, That nothing in this act shall be construed to apply to or limit, in any manner, the manufacture, advertisement or sale of proprietary medicines. It shall also be regarded as practicing medicine within the meaning of this act, if any one shall use in connection with his or her name the words or letters "Dr.," "Doctor," "Professor," "M. D.," or "Healer," or any other title, word, letter or designation intending to imply or designate him or her as a practitioner of medicine or surgery in any of its branches: Provided, That this act shall not be construed to apply to non-itinerant opticians who are at this time engaged in the practice of optometry in this State, nor to professional or other nurses. In charging any person in an affidavit, information or indictment with a violation of this law by practicing medicine, surgery or obstetrics without license, it shall be sufficient to charge that he did, upon a certain day and in a certain county, engage in the practice of medicine, he not having any license to do so, without averring any further or more particular facts concerning the same.' The amendments to the different sections which were added by the Legislature are given in italics.

"Section 4 was introduced and passed in the Senate as an amendment to the bill, and it was further amended in the House. It

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relates to osteopaths, and while it permits osteopaths, now practicing in this State with diplomas from any osteopath college, to obtain a license, it provides such careful restrictions for those who apply hereafter, that it is difficult to see how any friend of advanced medical legislation can object to this section, as far as it relates to future applicants. It reads as follows: 'The said board may grant certificates which shall authorize the proper clerk to issue to the holder thereof a license to practice osteopathy only. Such certificate shall be issued on the same terms and conditions as others, except that the applicant therefor shall not be required to pass an examination in materia medica, nor shall the college from which he presents a diploma be required to conform to the standard fixed by said boards as to instructions in materia medica, but such college shall so conform in all other branches of instruction. Such license shall not authorize the holder thereof to administer or prescribe or use on one other than himself any drugs or medicines, and any such administration, prescription or use of any drug or medicine by the person holding such limited license shall be practicing medicine without a license, and such person shall be punished therefor as others are punished for practicing medicine without a license: Provided, further, That any person now holding a diploma issued from any college of osteopathy in the United States and is a resident of the State of Indiana, shall be granted a certificate and license to practice osteopathy upon presenting his diploma to said Board and clerk and paying the fee required by this act.'

"The bill has an emergency clause and became a law at half-past ten o'clock on the closing evening of the Legislature, when the Governor filed it with the Secretary of State and notified the Senate that he allowed it to become a law without signing it.

"Indiana now has a medical law which places it on a level with other states having examination laws. The status of medical colleges is more clearly defined in that no one is eligible to examination who is not a graduate of a first-class medical college. All who secure licenses must hereafter pass a State examination with the temporary exception above noted, and the Board can more easily revoke licenses obtained by fraud. While 150 to 200 osteopaths now in the State are given licenses on their diplomas, it is provided

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that all osteopaths who apply hereafter must be graduates of schools maintaining the same standard in every particular as medical colleges and must pass an examination in everything that others are examined in except materia medica."

Litigation Under the Medical Law: The law has been decided constitutional by the Supreme Court, State v. Webster, 150 Ind. 607.

In an appeal from a decision by the Board the State is the appellee and must be represented by the Prosecuting Attorney. The Board is not a party to the appeal.

In re Application of Coffin, 152 Ind. 439.

In a prosecution under this law, it is sufficient to charge the offense in the language of the statute.

Eastman v. State, 109 Ind. 282;
Benham v. State, 116 Ind. 112.

The burden of proving the defendant was duly licensed to practice medicine is on the defendant.

Benham v. State, 116 Ind. 112.

In such prosecutions it is not necessary for the State to deny or prove exceptions made by the statute.

Ferner v. State, 151 Ind. 249.

Nor need the affidavit or indictment show that the State Board or any member instituted the prosecution.

Commonwealth v. Tobias, 141 Mass. 129;
Commonwealth v. Murphy, 147 Mass. 577;
Commonwealth v. Gay, 153 Mass. 211;
Commonwealth v. McDonnell, 157 Mass. p. 409;
Portland v. Rolfe, 37 Me. p. 402;
Stuart v. People, 42 Mich. p. 259.

Suit was brought against Dr. J. C. Driver, of Atlanta, Hamilton County, for practicing medicine without a license. It was shown that Dr. Driver had quite abandoned practice, but his sign still remained on the door of his office. Judgment for practicing without a license was rendered.

J. B. Oliver, colored, practicing at Brazil, had a County Clerk's license secured a few weeks before the taking effect of the law of 1897. In order to secure this license oath was made by Oliver

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that he was a graduate in medicine. Upon the license thus secured the Medical Board granted a license under the law of 1897. It being discovered that Oliver was not a graduate, the Medical Board revoked his license. The Clay County court gave judgment in favor of Oliver, but the Appellate Court reversed the same.

Prof. George P. Parks, magnetic healer, of Bedford, had himself arrested for practicing medicine without a license to make a test case. Judgment went against him. Case is now appealed.

DENTAL LAW.

No amendments in this law since last report of this committee. There is, however, an important decision to record. In the Grant County court Timothy T. Overshiner was convicted of practicing dentistry without a license. Case was appealed, plea being the law was unconstitutional because under it the Indiana State Dental Society appointed three members of the State Board of Dental Examiners, and the Legislature has no constitutional authority to confer police powers on a private corporation. The Supreme Court sustained the law.

PHARMACY LAW.

State, ex rel., v. Indiana Board of Pharmacy. In this case the question involved was, should a mandamus be issued requiring the Pharmacy Board to issue an applicant a license without examination or diploma, under the provisions of the Pharmacy Act of 1899, who at the time of the taking effect of the act was the proprietor or manager of a store or pharmacy in which physicians' prescriptions were compounded, where the petition showed that the relator became the owner of the pharmacy on June 19, 1899, when such act took effect April 27, 1899. The point was, did the act take effect in April or July 1, as the law contained a clause requiring all applicants to be licensed without examination or diploma to be made by July 1, 1899. It was decided this clause had no bearing upon the time the act went into effect, as the constitution provides on this question. This judgment is of interest to the medical profession of Indiana, because, had the decision existed in 1897 the Medical Board could have refused to issue licenses to many who now have them who are unworthy.

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There were five acts passed by the Assembly of 1901 bearing upon hygiene, namely: An act conferring powers upon the State Board of Health to grant permits to industries to discharge refuse into streams; an act creating a State Embalmers' Board, controlling undertakers; an act creating a State Veterinarian, having control over infectious and contagious diseases among animals; an act providing for the licensing of practitioners of veterinary science, and an act, popularly termed the "Fish Law," prohibiting the discharging into streams of any factory refuse in sufficient quantities to kill fish. All of these laws are now in force, but there are no judgments to record concerning them.

THE LABORATORY BILL.

The State Board of Health, being commanded by the food law to enforce said law, recommended to the Legislature that a laboratory be created to make enforcement possible. It was proposed that the laboratory should be called the State Laboratory of Hygiene and should be used not only for making food and drug analyses for the purpose of discovering adulteration and violation of the law, but also for making sanitary analyses of all kinds, and also pathological examinations for the purpose of aiding diagnosis. The bill was very carefully prepared and presented to the Legislature which adjourned March 11, but it failed to become a law. It passed the Senate and went smoothly to the third reading in the House, but was never handed down for final passage. Strong influence was brought to bear upon the Speaker to induce him to hand down the bill for passage, but he steadily refused to act. Afterward in explanation, the Speaker said from his desk, "I have been accused of holding back the Laboratory Bill. This is not true. It was placed in its regular order and the House adjourned before reaching it and, besides, the gentleman who introduced it into the Senate, Mr. Guthrie, requested me not to push it." It will be observed the Speaker states he did not hold it back, but says that Senator Guthrie requested him not to push it. It is a matter of deep regret that the Legislature did not have the opportunity to vote upon the bill. The State is a decided loser by this failure of the Legislature to create a Laboratory which would, undoubtedly, have saved, annually, large sums of money to the people, and which

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would have been an important factor in the matter of preventing disease and saving life. Of course, a laboratory will some day be created in Indiana, for we are certain to progress equally with other states.

SMALLPOX—MONTHLY STATEMENTS.

January—

Smallpox was reported in the following counties during January: Allen, 10 cases, 2 deaths; Dearborn, 2 cases; Decatur, 3; Huntington, 6; Jefferson, 6; Jennings, 7; Lawrence, 18; Marshall, 5; Monroe, 2; Ripley, 1; Fountain, 3; Benton, 1; Hamilton, 4; Lake, 4; White, 2; Marion, 6.

February—

There were 165 cases of smallpox and 2 deaths from the disease reported in February, as follows: Randolph County, 1; Daviess, 10 cases, 1 death; Monroe, 5; Marion, 17; Lake, 12; Dekalb, 18; Vigo, 2; St. Joseph, 1; Elkhart, 2; Pike, 4; Dubois, 2; Perry, 2; Newton, 3; Allen, 14; Lawrence, 70 cases, 1 death. The disease is still mild and frequently mistaken for chickenpox. One doctor in Lake County had the disease and he and two other physicians regarded it as vaccinia, but now concede they were in error, because later the doctor's baby had unmistakable smallpox.

March—

There were 472 cases of smallpox and five deaths from the disease reported in March: One in Allen, 1 in Dekalb, 1 in Marion, 1 in Vermillion and 1 in Daviess counties.

The counties visited by the disease were Marion, 22 cases; Steuben, 1; Pike, 4; Fulton, 12; Tipton, 6; Vanderburgh, 1; Lake, 12; Posey, 6; Lawrence, 101; Vermillion, 16; Dekalb, 5; Howard, 8; Perry, 1; Dearborn, 4; Wabash, 1; Ohio, 74; Switzerland, 200; Wayne, 1; Noble, 2. The cases are generally mild, yet there are not a few severe cases. In the localities infected by this smallpox, there are always found some uninformed doctors who deny that the disease is smallpox, and they, of course, have more or less of a following. This makes it difficult to maintain quarantine and secure vaccination. Frequently the people are not aroused to a proper appreciation of the situation until death occurs. In Vermillion County was the last instance of this kind. There

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some doctors ridiculed the idea that the prevailing eruptive disease was smallpox. Certain newspapers made fun of it and many careless and thoughtless people follow these leaders. On Thursday, March 28, John White, living at Summit Grove, died of this disease. The neighborhood then became more serious.

April—

Smallpox prevailed in the following counties during April: Dekalb, 30 cases; Vermillion, 6; Howard, 16; Hamilton, 5; Lawrence, 22; Fulton, 15; Parke, 1; Clay, 27; Putnam, 1; Madison, 5; Dubois, 23; Clinton, 10; Delaware, 7; Switzerland, 36; Ripley, 5; Marion, 34, and 1 death. We feel impelled to make the usual statement that many physicians still fail to diagnose the disease. Even typical cases are very frequently missed. Anti-vaccination literature is widely distributed and vaccination is considerably prevented thereby.

May—

Smallpox was reported from 19 counties, as follows: Dubois, 10 cases, 1 death; Madison, 15 cases, 1 death; Lawrence, 12 cases, 1 death; Perry, 10 cases; Howard, 6; Hancock, 4; Clay, 20; Vanderburgh, 17; Fulton, 2; Knox, 7; Union 1; Dekalb, 18; Dearborn, 4; Lake had probably 60; Elkhart, probably 10; Jefferson reported 5; Floyd, 3; Porter, 4; Switzerland probably had 10. The disease is now more frequently reported in semi and confluent form, with an occasional hemorrhagic case. These facts, together with the deaths, show that even very mild smallpox is dangerous and must not be played with. Many persons, not trained in medicine, and who have never seen smallpox, and have not seen the cases in dispute, unhesitatingly declare their belief that there is no smallpox. Health Officers are advised to be patient and long-suffering with such ignorance and viciousness, and simply to go ahead and perform their duty according to the law and the rules.

June—

One hundred and twenty-three cases and three deaths from smallpox were reported during June, as follows: Clinton County, 20 cases, 1 death; Posey, 4 cases; Cass, 3; Owen, 1; Jay, 1; Kosciusko, 11; Allen, 12 cases, 1 death; Laporte, 6 cases, 1 death; Tippecanoe, 32 cases; Montgomery, 1; Adams, 32; Marion, 12;

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Jackson, 1. A house-to-house inspection was made in the eastern part of Adams County the first week in July, and at many farm-houses it was discovered that smallpox had existed in mild and severe forms, but there had been no deaths. These cases were not reported, as no physician was called. Some Adams County physicians persist in declaring the disease is not smallpox, although it certainly is.

July—

There was a marked decrease in smallpox for July as compared with the previous month. It was reported from four counties only, namely: Daviess, Dearborn, Spencer and Marion. An apology is to be made for the imperfect smallpox report for this month. For a variety of reasons, it proved impossible to secure the number of cases. There were no deaths reported.

August—

There were exactly 100 cases of smallpox reported from the following counties: Adams, 20 cases; Daviess, 28; Porter, 3; Marion, 6; Randolph, 3; Dearborn, 4; Spencer, 12; Ohio, 6; Switzerland, 11; Dekalb, 7.

September—

Smallpox was reported from the following counties: Dearborn, 5 cases; Wayne, 15; Tipton, 2; Wells, 3; Knox, 5; Daviess, 20; Hendricks, 13; Jay, 1; Randolph, 4; Delaware, 1; Grant, 2; Warrick, 3; Laporte, 6; total, 80 cases.

October—

There were two deaths from smallpox in October, one in Laporte County and one in Daviess County. Cases were reported as follows: Laporte, 4 cases; Dearborn, 7; Warrick, 4; Adams, 17; Wayne, 12; Vanderburgh, 14; Daviess, 41; Spencer, 12; Marion, 2.

November—

There were 186 cases of smallpox with 2 deaths in the State in November, as follows: Spencer, 54 cases, 1 death; Jefferson, 27 cases, 1 death; Randolph, 1 case; Switzerland, 10; Adams, 18; Gibson, 13; Pike, 1; Dearborn, 6; Kosciusko, 5; Wabash, 6; Marshall, 1; Warrick, 17; Marion, 3; Vanderburgh, 19; Perry, 15. The State Board continues to tell the people that while quarantine

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and isolation will usually stop the spread of smallpox in any locality, still it almost certainly will return again and again until the greater proportion of the unvaccinated have it. Vaccination is the only prophylaxis to be relied upon.

December—

The cases of smallpox reported numbered 465, in the following counties: Vanderburgh, 40; Kosciusko, 26; Tippecanoe, 41; White, 1; Union, 13; Lawrence, 1; Spencer, 31; Vigo, 1; Owen, 3; Scott, 12; Pike, 1; Marshall, 3; Switzerland, 1; Randolph, 3; Dearborn, 9; Warren, 1; Knox, 4; Wabash, 19; Warrick, 41; Shelby, 12; Jefferson, 80; Miami, 12; Wayne, 40; Daviess, 41; Adams, 3; Madison, 2; Perry, 20; Delaware, 4. There was one smallpox death in Warrick and one in Tippecanoe counties.

SICKNESS—MONTHLY STATEMENTS, 1901.

January—

The reports indicate that the following diseases increased in area of prevalence over the preceding month: Influenza, bronchitis, pneumonia, tonsilitis, pleuritis, whooping-cough, measles, puerperal fever and cerebro-spinal meningitis. The diseases which decreased in area of prevalence were: Rheumatism, scarlet fever, typhoid fever, diarrhoea, diphtheria, intermittent fever, erysipelas, dysentery, cholera infantum and cholera morbus.

February—

The usual morbidity reports show a decrease in sickness in February as compared with the preceding month. The deaths also were fewer. The diseases which increased in area of prevalence were: Influenza, tonsilitis, rheumatism, pleuritis, scarlet fever, measles, erysipelas, inflammation of bowels, cerebro-spinal meningitis. The diseases which decreased in area of prevalence were: Typhoid fever, diphtheria, intermittent fever, whooping-cough, dysentery and cholera infantum. There were 165 cases of smallpox reported and 2 deaths. The disease is still mild. Two deaths occurred, one in Daviess and one in Lawrence counties.

March—

The usual morbidity reports show a decrease in sickness in March as compared with the preceding month. The deaths also

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were fewer. The diseases which increased in area of prevalence were: Influenza, rheumatism, measles, pleuritis, intermittent fever, diphtheria, diarrhoea, whooping-cough, cerebro-spinal meningitis and cholera morbus. The diseases which decreased in area of prevalence were: Bronchitis, pneumonia, tonsilitis, typhoid fever, inflammation of bowels, puerperal fever and dysentery.

April—

Smallpox excepted, the general health was better during April as compared with March. The order of disease prevalence was: Rheumatism, tonsilitis, influenza, bronchitis, measles, pneumonia, diarrhoea, typhoid fever, intermittent fever, pleuritis, whooping-cough, scarlet fever, erysipelas, dysentery, inflammation of bowels, diphtheria and croup, cholera morbus, puerperal fever, cerebro-spinal meningitis, cholera infantum. The following diseases decreased in area of prevalence as compared with the preceding month: Rheumatism, tosilitis, influenza, bronchitis, pneumonia, cerebro-spinal meningitis. The diseases which increased in area of prevalence were: Measles, diarrhoea, typhoid fever, intermittent fever, whooping-cough, dysentery, inflammation of bowels.

May—

Reports to the State Board from all counties show a decrease in sickness during May. The following diseases materially decreased: Tonsilitis, measles, pneumonia, influenza, intermittent fever, typhoid fever, pleuritis, erysipelas, whooping-cough, cerebro-spinal meningitis and dysentery. There was a very slight increase in rheumatism, scarlet fever, inflammation of bowels, cholera morbus, cholera infantum, diphtheria and puerperal fever. The mortality reports corroborate the morbidity reports.

June—

The usual morbidity reports show a decrease in sickness as compared with May. The deaths were fewer by 313. Diarrhoeal diseases increased considerably, as shown by both mortality and morbidity reports. Pneumonia, typhoid fever, diphtheria, scarlet fever, whooping-cough, measles, bronchitis, influenza, pleuritis and puerperal fever show a marked decrease. Cerebro-spinal meningitis was not epidemic at any point. It was reported as present at 37 places and there were 7 deaths.

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July—

There was an increase in the area of prevalence in the following diseases in July over the preceding month: Diarrhoea, cholera morbus, cholera infantum, dysentery, rheumatism, intermittent and typhoid fever. A decrease in area of prevalence appears for the following diseases, compared with the preceding month: Tonsilitis, inflammation of bowels, bronchitis, measles, diphtheria and croup, scarlet fever, pleuritis, influenza, pneumonia. There was undoubtedly an increase in the diarrhoeal diseases for July over the preceding month.

August—

The disease prevalence reports show the following diseases increased in prevalence in August over July: Cholera infantum, rheumatism, typhoid fever, dysentery, intermittent fever, bronchitis, influenza, pneumonia, diphtheria. The diseases which decreased in prevalence were: Cholera morbus, inflammation of bowels, whooping-cough, scarlet fever, measles, pleuritis, erysipelas, puerperal fever.

September—

The disease prevalence reports indicate less sickness in September than existed in August. The same condition is indicated by the mortality figures. The following diseases increased in prevalence as compared with August: Typhoid fever, intermittent fever, tonsilitis, bronchitis, diphtheria and croup, scarlet fever, pleuritis, influenza, pneumonia, erysipelas, cerebro-spinal meningitis. A decrease in prevalence occurred in diarrhoea, rheumatism, cholera infantum, dysentery, cholera morbus, inflammation of bowels, whooping-cough, measles.

October—

The morbidity reports from 57 counties indicate an increase in the following diseases over the preceding month: Typhoid fever, rheumatism, tonsilitis, bronchitis, scarlet fever, diphtheria and croup, influenza, pneumonia, pleuritis, erysipelas, measles, puerperal fever. A decrease in the following diseases is indicated: Intermittent fever, diarrhoea, dysentery, inflammation of bowels, cholera infantum, whooping-cough, cholera morbus, cerebro-spinal meningitis.

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November—

Reports from 67 counties indicate that bronchitis was the most prevalent disease during the month, then follow in the order given: Tonsilitis, rheumatism, typhoid fever, influenza, intermittent fever, pneumonia, diphtheria, scarlet fever, diarrhoea, pleuritis, inflammation of bowels, measles, whooping-cough, cerebro-spinal meningitis.

December—

Reports from eighty observers indicate that tonsilitis was the most prevalent disease in the month, then follow in the order given: Bronchitis, influenza, rheumatism, pneumonia, typhoid fever, intermittent fever, pleuritis, scarlet fever, diphtheria, diarrhoea, erysipelas, inflammation of bowels, measles, dysentery, puerperal fever, whooping-cough, cerebro-spinal meningitis.

QUARANTINE.

An Act to provide for the restriction of dangerous communicable diseases, prescribing penalties and repealing all conflicting acts.

Section 1. Be it enacted by the General Assembly of the State of Indiana, That any physician called upon to attend a sick person, and who finds the cause of such sickness to be of a contagious or infectious character, or if the disease is ordered to be reported in the rules of the State Board of Health, shall declare a quarantine of such person at once and report the fact to the Secretary of the Board of Health having jurisdiction. Such quarantine shall continue in force until relieved or revoked by the said Secretary.

Sec. 2. Whenever any person knows or has reason to believe that any member of his family or household (boarder, roomer or visitor) has either smalpox, diphtheria, membranous croup, scarlet fever, typhoid fever, measles, or any other communicable disease listed in the rules of the State Board of Health, he shall, within twenty-four hours from the time the existence of the disease is known, if no physician is in attendance, give notice thereof to the local officer of the town or city in which the disease occurs, or the County Health Officer, if the case is without the corporation of cities or towns, and such notice shall be given either verbally or by written communication mailed or delivered within the time specified.

Sec. 3. The Health Officer having jurisdiction, upon being notified of the existence of either of the four diseases named in Section 2, or of other diseases listed in the rules of the State Board of Health, shall immediately, in person or by deputy, quarantine the infected house, rooms or premises, so as effectually to isolate the case, and the family, if necessary, in such manner as to prevent transmission of the disease, and whenever a house, tenement or room, is placed in quarantine, a placard shall be

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posted in a conspicuous position, giving the name of the disease in letters not less than two inches long and also containing the following quarantine order: "All persons are forbidden to enter or leave these premises without special permit from the Health Officer having jurisdiction, and all persons are forbidden to remove this card without orders from said Health Officer." The penalty for violating any of the provisions of this section shall be ten dollars fine or imprisonment for ten days, or both, as the court decides.

Sec. 4. Upon the appearance of either of the diseases named in Section 2 in any county, town or city in the State, the Health Officer shall make an immediate report to the State Board of Health upon blanks furnished for that purpose, and shall thereafter make a weekly report as long as the disease continues, stating number of cases, number of infected houses, fatality, and such other facts as may be required by the State Board of Health.

Sec. 5. As soon as possible after the recovery or death of any infected person or persons, the Health Officer having jurisdiction shall cause the infected premises to be thoroughly disinfected and cleansed according to the method prescribed in the rules of the State Board of Health, after which the said premises shall be released from quarantine.

Sec. 6. No parent, guardian, person or persons having the custody of any child shall permit such child, if infected with any communicable disease, or if it has been exposed to such, to attend any public or private school, or appear in public in any way, and all school teachers, public, private or parochial, shall exclude from their schools all such children unless a written permit is given by the Health Officer having jurisdiction.

Sec. 7. It shall be the duty of the secretary, or a representative of all Boards of Health, to attend a meeting of the State Board of Health, when requested by the latter, for consultation or conference concerning the restriction and prevention of contagious and infectious diseases, or for the consideration of other important sanitary matters, the expenses only of the delegate shall be paid by his Board.

Sec. 8. The expenses incident to disease prevention shall be paid by the cities and towns in which the work may become necessary, and when without the corporation of cities and towns said expenses shall be borne by the county. If at any time the authorities of any county, city or town fail, neglect or refuse to enforce the statutes and the rules of the State Board of Health for the restriction of dangerous communicable diseases, then the State Board of Health, if in its opinion it becomes necessary, shall take charge and enforce the law and the rules, and all expenses incident to such enforcement of the laws and the rules shall be paid by the county, city or town in which such enforcement becomes necessary.

Sec. 9. Any person who violates any provision of this act, or any rules or regulations of the State Board of Health for the enforcement of this act, except as otherwise provided, shall be punished by a fine of not less than ten nor more than one hundred dollars.

Sec. 10. All acts and parts of acts inconsistent with this act are hereby repealed.

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ABRIDGED ANNUAL REPORTS

OF

COUNTY HEALTH OFFICERS

CONCERNING

SANITARY CONDITIONS AND HEALTH

IN THEIR RESPECTIVE COUNTIES.

1901

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ABRIDGED ANNUAL REPORTS OF COUNTY HEALTH OFFICERS, 1901.

ADAMS COUNTY.

As a summary of my inspections and studies, I can confidently say the health of Adams County for 1901 has been fairly good. Typhoid fever has existed to a slight degree and only a few cases of diphtheria have been known. Scarlet fever has been rarely reported, but measles has prevailed rather extensively. There were 130 cases of smallpox during the year and no deaths. None of these cases were serious, all of them being of a mild type. Many physicians denied that smallpox existed, which I presume was the case in every county where this disease appeared. Two doubting physicians contracted the disease, and, after recovery, were completely convinced that the malady from which they suffered was smallpox.

The sanitary conditions of the jail and court house are passable and these institutions are well kept. Many of the schoolhouses of Adams County are unsanitary in their construction and most of them are well kept. Our County Infirmary is a new building with a dry basement, well lighted, heated and ventilated, and has accommodations for 72 inmates. There are three incorporated towns in the county, namely: Decatur, Geneva and Berne. The Health Officers of these places report the absence of epidemics, except of mild smallpox, and that the general health is good. These officers recommend several sanitary improvements for their respective towns, and it is hoped the recommendations will be adopted by the authorities.

H. F. COSTELLO,
Health Officer.

ALLEN COUNTY.

I made a careful inspection of the Allen County Infirmary, County Orphans' Home, County Jail, Reformed Orphans' Home and Catholic Orphans and found all in good sanitary conditions. No sickness of any kind prevailed in any of these institutions. We had an outbreak of smallpox in the Feeble-Minded Home, of about 15 cases, but by prompt isolation and vaccination of all of the inmates, including all of the employes of the institution, the disease was checked.

The general health of Allen County has been fairly good, there being more cases of typhoid fever, scarlet fever, measles and diphtheria than ought to have been, but there was no epidemic of any kind. Smallpox is still epidemic with us, every case is promptly isolated and quarantined, and an extra smallpox physician is sent for treatment.

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Our schoolhouses are in a fair condition and a good many new ones are built. As a general rule the physicians of Allen County have informed me of any contagious diseases and have sent in regularly their birth reports. Contagious diseases in the city of Ft. Wayne are handled just the same as in the county. Two sanitary officers are doing quarantining

CARL PROEGLER,
Health Officer.

BARTHOLOMEW COUNTY.

Several nuisances have been abolished during the year. Two sloughs, which were the source of ill health, have been drained by order of the County Board of Health and much good has resulted. An outbreak of scarlet fever occurred in Columbus, Hope and Elizabethtown in the months of October, November and December. There were also a few cases of diphtheria, but none of malignant form. Typhoid fever prevailed rather alarmingly, but the reports of cases are not sufficiently accurate to warrant any positive conclusions. Sanitation is undoubtedly advancing in the county for more and more people each year apply to the Health Department for advice and aid. An epidemic of measles spread over the county in October and there were three deaths on account of this disease. Usually, however, the cases were mild. Smallpox, in a mild form, appeared in the city of Columbus in July, 1901. There were four persons affected by the disease. Sanitary control was promptly imposed with the result of preventing the spread of the contagion.

The schoolhouses throughout the county are frequently in bad sanitary condition. Some of them are new buildings, well kept and satisfactory in every way. School authorities everywhere have been exhorted to improve their schoolhouses and specific instructions have been given how they may do so. The county asylum is in satisfactory sanitary condition. It is well kept, but some improvements have been recommended to the authorities, and I think they will be adopted. The Orphans' Home is a model of cleanliness and its surroundings are very attractive. Of course, some sanitary improvements should be made and a few minor ones have been recommended and they will probably be very soon supplied. The courthouse and jail are comparatively new structures, are well built and well kept. They are reasonably well ventilated, but improvements could be made in this respect. All of the city and town Health Officers have reported to me and it appears that the general health of their various jurisdictions has been quite satisfactory, with the exception of the ever-present typhoid. We hope very soon, by education, to lift the people out and away from the cases of typhoid. It is undoubtedly true that the draining of the land for agricultural purposes has more to do with the improvement of the public health than any direct efforts for that purpose.

J. S. ARWINE,
Health Officer.

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BENTON COUNTY.

Benton County has been remarkably free from epidemic diseases during the year. We had three cases of smallpox, one at Earl Park and two at Fowler, with no fatalities. There has been no typhoid fever during the year. The jail, located at the county seat, Fowler, is in a very unsanitary condition, but will be renovated within the next three months. A new poorhouse is at the present time being constructed, and from its plans it is plain to be seen that it will be a fine building and appropriate in every way for the purpose for which it is intended. The schoolhouses are as good as could be expected from buildings that are heated by stoves and ventilated by windows and doors. Their location is very good. The water supply is in every instance from deep driven wells and is excellent. I know of no school buildings where the outhouses are not kept in good condition. The town of Fowler will soon put in a complete sewer system, which will, of course, improve the sanitary conditions of the town very greatly.

D. E. MAVITY,
Health Officer.

BLACKFORD COUNTY.

There are only four townships in this county, with 169 square miles and 23,000 inhabitants. There are two incorporated cities and three villages. The county is pretty well drained. There are a number of small streams, some of them receiving sewage and others pollution. The health of the county has been good during the year. There were no epidemics. Four cases of smallpox developed in one family in Jackson Township. They were promptly placed under sanitary control and there was no spread of the disease. There are forty-eight district schools in the county. Forty-five are brick. As County Health Officer, I gave special attention to the cleaning of schoolhouses before school commenced in the fall. I am sure much good was produced in this way. The county poorhouse is in very good condition. It is a new building of brick and stone with most modern conveniences. It is well kept. The courthouse is a modern structure and is in good sanitary condition. The same may be said of the jail. Some improvements have been suggested and have been followed out.

Montpelier has 4,500 inhabitants and has a very active Board of Health. Many improvements, in a sanitary way, have been put in during the past year. In Hartford City a new sanitary and storm sewer is being constructed in the western part of the city. This sewer will drain a large section. The Health Officer has recommended a sewer for the east side and his recommendation has been favorably received. He has also recommended a garbage ordinance which it is hoped will be taken up by the council very soon.

W. N. CRONIN,
Health Officer.

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BOONE COUNTY.

From the records and general observation I am prepared to state there has been less sickness of every kind this year, than in any other year since the county was organized. There is much public interest shown in sanitation, especially in regard to water supplies. The farmers generally are thoroughly awake to the necessity of having good, pure drinking water. The dug wells are giving way to the driven wells, and, of course, health improvement will follow. The schoolhouses throughout the county are mostly of the old style, but none of them are in a dilapidated condition. Only a few have driven wells and some of them have water supplies which should be condemned. All of the schoolhouses in the county were thoroughly cleaned and disinfected before school opened in September. We have had no epidemics during the year. Have had some scarlet fever and diphtheria. The cases were all scattered. There have not been to exceed ten cases of typhoid fever and investigation proved the patients had all used water from dug wells. Our jail is in fair condition. Certain sanitary improvements have been recommended and will almost certainly be adopted by the Commissioners. Our poorhouse is in fine condition. It is new, is heated with hot air, and has all the modern improvements and conveniences. There are 28 male and 15 female inmates. There was not a death and no sickness of moment among them during the year. No smallpox, although two counties bounding us on the west have had it.

A. P. FITCH,
Health Officer.

BROWN COUNTY.

Typhoid fever pervailed in Brown County to a considerable degree during the year. There were 8 deaths from this cause. In every instance, bad drinking water was found where the disease existed. Scarlet fever and diphtheria has been mild. There was one death from scarlet fever and none from diphtheria. The high and rolling lands of Brown County gives good drainage and so we have natural sanitary conditions of a high order.

The county poorhouse is a new building, situated on high ground, heated by a furnace, water supply from driven well, has 11 inmates, all in good health. The poorhouse is well kept. The courthouse is an old building, is well kept, and is in only fair sanitary condition. The county jail is a two-story log building, very unsanitary, but is as well kept as conditions will permit. There are twenty-five schoolhouses in the county, all frame. It can not be said that one of them is strictly sanitary and some of them are dilapidated and so unsanitary they should be condemned. The water supply for many schoolhouses is from creeks and branches and nearby neighboring wells. Despite the unsanitary schoolhouses and surroundings, the health of the children seems to have been passably good. All new school buildings hereafter erected in the county shall conform to the sanitary requirements of the State Board of Health.

JAS. P. MOSER,
Health Officer.

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CARROLL COUNTY.

There were no epidemics during the year and less than the usual amount of contagious diseases. There has been a number of scattered cases of diphtheria and scarlet fever. Sanitary control was carefully exercised with all infectious troubles. The courthouse is in fair condition but needs better sewerage. The jail is unsanitary on account of defective plumbing. These defects in the courthouse and jail will be very soon remedied. The poorhouse is very well kept, but the building is old and unsanitary conditions exist. There are many very unsanitary schoolhouses in the county. As fast as new ones are constructed, the specifications of the State Board of Health are enforced.

J. J. SHULTZ,
Health Officer.

CASS COUNTY.

There were 513 deaths during the year in Cass County. Important causes of death were as follows: Typhoid fever, 14; tuberculosis, 68; diphtheria, 4; measles, 2. There were no epidemics during the year, and there were no deaths from scarlet fever or smallpox. There were in all twelve cases of the last named disease. I think the general health of the county during the year may be rightly spoken of as good. The poorhouse is in passable sanitary condition. Many improvements could be made and some have been recommended. The courthouse is a fine building and is sanitary in every respect except in regard to ventilation. The jail is well kept, but the ventilation is not what it should be. Several sewers have been built during the year at Logansport and several streets have been paved. These are to be counted as sanitary improvements and no doubt will have a good effect upon the health of the city.

DR. F. A. BUSHJAHN,
Health Officer.

CLARK COUNTY.

In my last report I was compelled to tell a sad story in regard to the county jail. I am pleased to report that during the year a new jail has been built and the drainage is now all that could be desired. The ventilation, however, is not what it should be. The jail is well kept. There has been no material change in the Orphans' Home and its management. The place is well kept. There has been very little sickness, and it was of a minor character. There were no deaths. The two hospitals at Jeffersonville are notable institutions, well kept and sanitary. They are the Deaconess Hospital, located on the river front, and the Mercer Hospital, located on Spring Hill. The Jeffersonville pesthouse is a passable building and is well kept. The poorhouse is a poorhouse indeed. It is a miserable building, is unsanitary, but is well kept. There is a demand on the part of the people that a new county asylum be built. There are 33 inmates at this time, 23 males and 10 females. Four new schoolhouses have been erected during the year, and all of them are built with sanitary principles in view. They are good buildings and

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well kept. The majority of the school buildings in the county are not what they should be and some of them are poorly cared for. The County Superintendent is alive to the situation, and, as fast as new buildings are constructed, they will be according to sanitary law. Several complaints of nuisances have been made during the year and all have been satisfactorily answered without recourse to law. There have been no epidemics during the year, but, of course, a few cases of scarlet fever and diphtheria have been reported.

Smallpox appeared in Jeffersonville on the 21st of May. The patient is said to have come from Louisville. He was sent to the pesthouse. On May 27 another case appeared in one of our citizens who had returned from the South. From that time it has existed every month, but at no time has it assumed an epidemic form. All precautions have been taken to prevent its spread. The whole number of cases of diphtheria reported during the year were 38, with 3 deaths. Scarlet fever reported, 57 cases, no deaths. Typhoid fever, 100 cases, 23 deaths. I believe the reports of deaths are very accurate.

W. H. SHEETS,
Health Officer.

CLAY COUNTY.

This county enjoys the distinction of being one whose death rate is always below the average, as is proved by comparison with the tables printed in the Monthly Bulletin. The county asylum is well kept, but its construction is not as sanitary as should be. There were 43 inmates during the year, 30 males and 13 females. Nine of these were insane. Several recommendations for improvements as to outhouses and other sanitary conditions were made to the County Commissioners, and said improvements were promptly made. There were only two inmates in the Orphans' Asylum. The building is large, well constructed and passably sanitary. The jail and courthouse are excellently kept, but are rather old buildings and are not sanitary in every construction. There seems to be a woeful lack of taste and pride in the way school buildings and premises are kept. There are signs of improvement, however, and the houses hereafter constructed will, undoubtedly, conform to right sanitary conditions. Smallpox has been epidemic almost continually since the Clay City experience of 1899, but has been confined to certain localities. The cost to the county of fighting smallpox, was, for the year, $1,500. There are six incorporated towns in Clay County and their Health Officers are alive to their duties and deeply interested in preventive medicine. There have been no epidemics of diphtheria, scarlet fever or typhoid, yet a few cases of these diseases have existed.

J. H. CARSON,
Health Officer.

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CLINTON COUNTY.

The health of the county has been very good during the year. There have been a few cases of typhoid fever and a few isolated cases of diphtheria and scarlet fever, but nothing like an epidemic. There was an epidemic of smallpox during the spring and earlier summer months. The first cases were traceable to the return of infected persons from Oklahoma. Proper sanitary precautions were taken to prevent spread. The sanitary conditions of the county may be classed as good. There is very little wet land and very few ponds. The principal roads are all in good condition, being well graded and graveled. The school buildings are mostly modern and up-to-date. The greater number are of brick. The water supply is always from driven wells. The outhouses are widely separated and have good walks leading to them with rare exceptions. The county poorhouse is kept as well as possible under the circumstances. The location is very good and the drainage satisfactory. The main building is of brick, but was built several years ago and is without modern conveniences and no sanitary principles were observed in its construction. There is great need of more room. There is only one bath tub and that is very badly arranged. The water supply is from a driven well and very satisfactory. The jail is a brick structure, but is very old and is not modern. It is very dark, damp and unsanitary. There are two tiers of cells. The sewerage is very poor and almost continually out of repair. There is but one bath tub and that is for the men. The heating is by steam and is not satisfactory. The courthouse is not a new building and has no special system of ventilation. It is well kept.

BENSON RUDDELL,
Health Officer.

CRAWFORD COUNTY.

The Crawford County jail is in very bad sanitary condition. The sexes are not kept separate; there are no closets and ventilation is very bad. There is only one in the jail at present and he is sick. These conditions have been brought to the attention of the Commissioners and I expect proper action will very soon be taken. The county asylum has 20 inmates and is well kept. The buildings were not constructed with any sanitary ideas in view. The schoolhouses of the county are all unsanitary. Their construction is not in accordance with sanitary requirements. Most of them are well kept. At the last meeting of the county teachers, I addressed them and many promises were made that sanitation would be looked after to the best of their ability. There have been no epidemics during the year and only a very few cases of mild smallpox. I believe that every death in the county has been reported. The physicians are in harmony with the Health Officers.

C. D. LUCKETT,
Health Officer.

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DAVIESS COUNTY.

The wet lands in Daviess County are rapidly disappearing on account of efficient tile draining being put in. The health is improving. Dug wells are being abandoned and driven wells put down. Typhoid fever and diarrhoeal diseases are in continual evidence in the City of Washington, the county seat. This is because of lack of drainage and bad water supply. This matter is under perpetual agitation. The public buildings of the county are in passable condition except the county jail. This building is unsanitary and will remain so until it is entirely remodeled. It is kept clean as possible under the circumstances. There has been little sickness in the jail during the year. The poor asylum is in passable condition. No epidemic present during the yaer. The inmates are well fed and properly clothed. Many improvements are demanded and its is expected these will be made within a few months. The Orphans' Home is a good building and is well kept. There have been no epidemics during the year. Three cases of diphtheria have appeared at different times, and two of scarlet fever were reported. Measles have existed to some degree among those inmates who had never had the disease before. The towns of Odon, Elnora and Montgomery are in passable sanitary condition. Nuisances were abated in all of the towns named and a general cleaning up was ordered and enforced during the summer months. No epidemics have existed. There have been a few isolated cases of scarlet fever and diphtheria during the year, also some typhoid and considerable measles. At no time has there been an epidemic of any kind. The physicians of the county are interested in sanitary matters and most of them promptly report births, deaths and contagious diseases. The city schoolhouses are all first-class and well kept. We have many country schoolhouses which are very unsanitary, some of them dilapidated and some of them are badly kept. Improvements, however, are apparent. In January, 1901, smallpox appeared in a mining district known as South Washington. About fifteen families in four school districts were infected. Exactly how many cases occurred will never be known, for many of them were so mild as not to require a physician and hence were never reported. The epidemic lasted until the middle of September during which time the disease was prevailing in Washington and surrounding country. Two hundred and two cases in all were reported, but it is believed that two or three times this number actually appeared. Vaccination, the only prophylaxis was offered to all without charge, but very few took advantage of it. A few physicians persist in calling the disease impetigo, cuban itch, etc. It is hoped they will learn, in due time, how to diagnose smallpox. The cost of the smallpox epidemic to the township was $2,358.25. The City of Washington had also many heavy bills to pay.

C. C. M'COWN,
Health Officer.

DEARBORN COUNTY.

The population of Dearborn County is 22,000, with 8 incorporated towns, 103 schools and about 7,000 school children. The county schoolhouses are in passable condition. Some are old and poorly lighted and ventilated. All school buildings are thoroughly cleaned and disinfected

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every fall before school begins. Some schools are not provided with good water. The county poorhouse is brick and was built in 1882. It has 64 rooms. Water supply is from dug wells and two large cisterns. There were 44 inmates during the year. The deaths numbered 7—6 male, 1 female. Causes of death were: Dropsy, 2; old age, 1; pneumonia, 1; tuberculosis, 1; hemorrhage, 1; general debility, 1. The building is heated by steam, but the ventilation is poor. The county jail is in good condition. It was built in 1893 and has 20 cells, is heated by steam, water supply from a driven well. The sewerage is satisfactory. There has been no sickness nor deaths during the year among the inmates. The number of contagious diseases reported for 1901 was greater than in the preceding year. Measles were twice as epidemic. The number of cases of diphtheria was 39; scarlet fever, 40; smallpox, 81; typhoid fever, 16; cerebrospinal meningitis, 1. These cases were spread all over the county, with the exception of smallpox, which was mostly concentrated in Lawrenceburg and Aurora. Lawrenceburg, the county capital, has a population of about 5,000. It is not completely sewered. It has three school buildings. All are well kept and in passable sanitary condition. The courthouse is a three-story stone building, built in 1872, well lighted and ventilated. The sewerage is good. The building is warmed by steam. The health of the city has been very good. A large majority of the cases of smallpox have been among the very poor.

A. T. FAGALY,
Health Officer.

DECATUR COUNTY.

Decatur County is located in the "Central Sanitary Section" of the State and has a population of 19,518, of which the City of Greensburg claims 5,034, the remainder, 14,484, we will call the rural population of the county and will consider the vital statistics, as relates to that portion of its citizens only, in this report, whether favorable or otherwise to its people.

Judging from the increased death list of the county, for the year ending December 31, 1901, it might be inferred that the sanitary condition was less favorable than in the two preceding years; the average death rate of which was 131, that of the year just closed being 142.

Referring to the records of the last three years, we find that there has been no epidemic of significance; that consumption still leads in the mortality list as heretofore; intestinal diseases of children being next, with an increased number of fatal accidents in 1901. Apoplexy and paralysis, pneumonia and cancer give the usual proportion of deaths of former years. There were four deaths from typhoid fever, one from malarial fever, one from diphtheria, none from scarlet fever, measles or membranous croup. There was one case of smallpox, no death or additional infection.

Comparing the number of deaths in persons between the ages of 60 and 90, which was 64, we find 12 more deaths this year than the average of the two preceding years (52). Excluding this class and the increased number of deaths from accidents, that occurred in the county, our mortality list is less than in 1899 and 1900. We therefore think the increased death rate was not due to a worse sanitary condition.

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There were 20 deaths in persons over 40 years of age, from diseases of heart, and the great majority of these over 60 years of age were classed as senile "heart failure."

The courthouse, jail, orphans' home and county asylum are in good sanitary condition. There are at the latter place 14 males and 9 females. There were 6 deaths, mostly the result of age. The Odd Fellows' Home, recently built in the City of Greensburg, is under the supervision of the Grand Lodge of the State. There are at present 59 guests, of which 28 are children.

With the beginning of the school year, I sent to the Township Trustees of the county a copy of the Health Order of 1898, issued by the State Board of Health, relating to the renovation and cleaning the schoolhouses. I have good reasons to believe that this order was generally enforced.

There are 88 schools in the county, including those in Greensburg, in charge of 145 teachers. There are four schoolhouses that are not occupied in the districts. Isolated cases of contagious diseases caused the dismissal of three schools for a short time. About one-half of the township schools have driven wells. In two of the townships it is found that steps will have to be taken to provide better facilities, not only in the buildings, but in changing the localities, and perhaps in consolidating school districts. This, as it generally has done, will cause some dissatisfaction, and has perhaps been deferred for this reason, to the injury of the pupils.

Two new school buildings have been added, or taken the place of others. These were of brick and are favorably located.

The school buildings and surroundings, with the exceptions noted, are in very fair condition from a sanitary point of view.

Dr. E. T. Riley, the Health Officer of the City of Greensburg will report on the condition of the city schools and such other matters as are required of him in the call for this report.

JNO. H. ALEXANDER,
Health Officer.

DEKALB COUNTY.

Our courthouse is an ancient structure, and is very unsanitary, but is as well kept as the conditions will permit. The county jail is an old structure and is unsanitary. It is as well kept as conditions will permit. The poorhouse is old and unsanitary. We have 104 brick schoolhouses in use in the county, all of which are in passable sanitary condition. There are three frame schoolhouses which are in poor sanitary condition, but they will be improved next year. We have had 24 cases of smallpox in the county, but no deaths. Only a few cases of scarlet fever have been reported and no deaths.

D. A. SEBRING,
Health Officer.

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DELAWARE COUNTY.

Smallpox appeared in February, near Muncie. The disease had gained considerable foothold before it was discovered. It was eradicated by the most stringent measures. In the winter and spring of 1901 measles appeared in epidemic form in Muncie and various other parts of the county. About 1,000 cases appeared, with 2 deaths. The jail is inadequate to meet the demands made upon it. The sanitation is very faulty. The one room, which constitutes the woman's department, can not be ventilated. Demoralizing influence prevailed in the male department, as it is impossible to separate young boys from hardened criminals. The jail is not sanitary, but is as well kept as possible under the conditions. Improvements have been made in the children's home in the past year. Wash rooms and closets have been provided. The county poorhouse is of brick, and is in good sanitary condition. Sanitary principles were not fully consulted when it was constructed. A modern system of waterclosets has been placed on the first floor of the courthouse. Both these buildings and the jail are now heated by steam. I have been making a special effort to improve the sanitary conditions of the schoolhouses of the county. Several new buildings have been erected within the year and all sanitary features have been incorporated. The consolidation of schools in some of our townships will probably cause the permanent abandonment of some unsanitary schoolhouses. I have had a form of report drawn up and distributed to all of the teachers and have been gratified to receive full reports from every school in the county. In Muncie there was a severe epidemic of measles in the spring and one of smallpox in February, March, April and May. There were 30 cases of smallpox in all, with no deaths. All afflicted had never been successfully vaccinated. The county and the City of Muncie, jointly, own a contagious disease hospital. This institution has been of great use in extinguishing smallpox. Effort has been made to bring about more thorough cleanliness of our alleys and private premises. Prompt return of diseases and births are made in Muncie. The public health of Albany has been unusually good for the past year. No cases of contagious diseases, except measles, have been reported. There is much sanitary work to be done in the town. It is without a comprehensive sewer system and there should be a garbage ordinance. There were 3 cases of typhoid fever reported, 1 was fatal. Every spring we have a general cleaning up which unquestionably does much to preserve the public health. We have had no scarlet fever or diphtheria during the year. Tuberculosis is ever present. Whenever a death occurs from this disease, thorough disinfection of the premises is practiced. A few cases of pneumonia appeared during the winter at Albany, but no deaths.

H. A. COWING,
Health Officer.

DUBOIS COUNTY.

The health of the county during the year has been fairly good. There has been some typhoid fever, but no epidemic of the malady. Several cases of diphtheria were reported from various parts of the county with several deaths. I have reported many instances where the parents refused to

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allow the use of antitoxin. We had 18 cases of smallpox from one township, most of them being mild cases, with one death. In the spring there was an epidemic of measles. Dubois County is generally rolling and the drainage is, therefore, good. All new schoolhouses in the county are well located, but the improvement along the line of heating and ventilation does not keep step with the march of other school work. There should be a statute controlling the sanitary features which all schoolhouses should contain. The County Superintendent suggests that the truancy law causes more sickness in the schools than was formerly the case. Children from homes which are very poor are now forced into schoolrooms and very often carry disease. Jasper, the capital, had 28 deaths and 59 births during the year. There were 5 cases of typhoid fever and 3 cases of diphtheria. Sewerage and the garbage question should be speedily attended to. The sanitary conditions at Huntingburg are only passable. School buildings are very satisfactory. There was an epidemic of diphtheria in mild form during the year. Fifty cases were reported, with 2 deaths. Huntingburg needs a more efficient sewer system.

J. F. MICHAELS,
Health Officer.

ELKHART COUNTY.

From my inspections and studies I conclude this county is in passable sanitary condition with the exception of a portion of the City of Elkhart. The schoolhouses throughout the county, with very few exceptions, are modern in construction and sanitary principles have been applied. The sanitation of the school buildings will be carefully looked after. The jail is in bad sanitary condition. The plumbing is defective and also the sewerage. This matter has been brought to the attention of the Commissioners and County Council. The poorhouse is in passable condition. It has recently been repaired and modern heating and excellent sewerage provided. The courthouse is in passable sanitary condition. The courtroom is not properly ventilated, but this can be corrected with very little expense. There was an epidemic of smallpox during the summer months of July and August. There were 20 cases in all reported, with no deaths. The disease was of mild type. At the present time there is an epidemic of mumps all over the county. There has been some scarlet fever and diphtheria, but no epidemic.

E. E. ASH,
Health Officer.

FAYETTE COUNTY.

There was a little scarlet fever during the year, but it was of a mild type. The school buildings in the county are mostly in good condition. There are some which are very unsanitary and others which should be condemned. As fast as new ones are built, the Health Department sees to it that they contain the modern sanitary improvements. The country, in general, is rolling and this insures good drainage, a point which favors the public health. The poorhouse is old and not modern. It is as well kept as is possible under the circumstances. The authorities contemplate building a new poorhouse. There were two cases of smallpox during the

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year. Vaccination proceeds slowly. The sanitary conditions of Connersville are fairly good. Schoolhouses are satisfactory from a sanitary standpoint. The courthouse and jail are well kept and in good sanitary condition. Connersville needs a more extended sewer system, which will probably come in due time. There were 52 cases of smallpox reported during the year and nearly all were of a very mild type. There were 2 deaths. Seventeen cases of diphtheria and no deaths, 2 cases of smallpox occurred in the city during the year.

E. DERBYSHIRE,
Health Officer.

FLOYD COUNTY.

The death rate of Floyd County was 1.2 higher in 1901 than in 1900. The marriages numbered 308, births, 266. There was no smallpox during the year. One hundred cases of diphtheria were reported, 20 cases of scarlet fever, 22 cases of typhoid fever. Measles prevailed to a considerable degree. The New Albany schools were closed for two weeks in October, on account of diphtheria. The disease subsided to reappear when school was resumed, and it continued more or less until late in the spring. I met with the County Council six different times to discuss the improvement of the county jail. At the February meeting the building was condemned as a shame and disgrace to civilization and I was appointed to see an architect and have plans made for improvement and also plans for a new building. The council has taken no action upon my recommendations and the plans offered. The Sheriff keeps the jail as clean and neat as he can under the circumstances. The poorhouse is well kept, but is unsanitary in many particulars. The unsanitary conditions have all been reported to the authorities with recommendations. The Orphans' Home is well kept and is satisfactorily sanitary. The school buildings of this county are not what they should be; with rare exceptions they are unsanitary, many of them are dilapidated and some of the better ones sadly need modern repairs. In October I visited the school buildings in Lafayette Township and found they had not been swept since the previous session of school had closed. Upon my demand this neglect was corrected. An order has now been issued by the County Board of Health governing this matter.

The town of Georgetown is only passably sanitary. Some improvements were made during the year, such as the removal of pig pens, cleaning of alleys and emptying of vaults. The schoolhouse in that town is in passable condition. It needs some improvements. The town of Greenville has been put in very good sanitary condition. A general cleaning up has effected this end. The school house is not what it should be from a sanitary standpoint, and improvements in this regard will be made during the next vacation. There were a few cases of scarlet fever during the year at Greenville, but no deaths.

New Albany is a very old city. There are too many dilapidated buildings. The sewerage is not what it should be and the city is not clean as proper santitation demands. Progress, however, is being made.

R. W. HARRIS,
Health Officer.

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FOUNTAIN COUNTY.

There were no epidemics in Fountain County during the year. No smallpox to record, although this disease infected adjoining counties. The courthouse is not sanitary and is only passably kept. The same is to be recorded in regard to the poor farm. The sanitary condition of the jail is only passable and I contend that better sewerage and better drainage are demanded. All deficiencies have been brought to the attention of the County Board of Health with recommendations, but no action, so far, has been taken. The school buildings of the county are not what they should be. Some of them are very old, dilapidated and very unsanitary. A few meet modern requirements. There is probably not a schoolhouse in the county that could not be improved in some particulars. The water supply for school buildings could be bettered in many instances.

GEORGE ROWLAND,
Health Officer.

FRANKLIN COUNTY.

The entire area of Franklin County is rolling and, therefore, drainage is usually good. Measles was the only epidemic disease that has appeared during the year. The death rate was 14.4, which is 1.3 higher than the preceding year. I think this largely due to the extreme dry and hot weather, which, of course, impose severe conditions upon infants. The school buildings are, many of them, old and dilapidated. There are also a goodily number which are new and well built. Very few of them, however, were built with any idea of sanitation in view. The vault nuisance is always with us, and certainly is the cause of not a little disease. The county poorhouse is in good shape. There are 50 inmates at present. The buildings are brick and heated by steam. The water supply is plentiful and of good quality. The vault system of disposal is used. The Childrens' Home is in good condition. It is a good, substantial brick buildings with 13 rooms, heated by stoves. Ventilation is by windows and doors and is closely watched by the Superintendent. A bathroom is needed at this institution. The jail is a brick structure with stone corridors and cells. It is heated with stoves. It is damp and unsanitary. The vault disposal is used.

GEO. E. SQUIER,
Health Officer.

FULTON COUNTY.

Fulton County has an excellent water supply, which is secured from driven wells. There are very few dug wells in the county. Of the 207 total deaths during the year, only 7 were from typhoid fever; 20 were from tuberculosis; 4 from diphtheria and 1 from scarlet fever. The schoolhouses are old and unsanitary. As fast as new ones are constructed they are built in conformity with modern ideas and modern sanitary demands. Instructions have been issued to trustees and school authorities in regard to the necessity of cleanliness and in regard to the necessity of pure water. The ventilation of a schoolhouse, which must depend for ventilation upon windows and doors, is entirely in the hands of the

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teacher. It is true that it is impossible to properly ventilate schoolhouses by windows and doors. The courthouse at Rochester is a new structure and is generally up-to-date, but there is no special arrangement for ventilation as there should be. The jail is well kept and is passably sanitary. Rochester has put in some sewers which will, of course, greatly improve matters, and contemplates, next year, the disposal of sewage by filtration beds. There has been no epidemic of diphtheria or scarlet fever, but measles has been epidemic twice. The county has been invaded by 6 cases of smallpox.

CHAS. E. GOULD,
Health Officer.

GIBSON COUNTY.

I believe the sanitary condition of this county, for 1901, is better than in previous years. Many recommendations have been made to the people, and, in many instances, these recommendations have been carried out. The school buildings are not all satisfactory. Some of them are very poor and should be condemned. A few are excellent and meet all modern sanitary requirements. This matter has been brought to the attention of the County Board of Health with recommendations, but no action has been taken to this date. There has been some contagion in the county, two schools were closed for a short time, on account of smallpox. There have been no epidemics of scarlet fever or diphtheria. Whooping cough was epidemic during the entire year.

J. S. CRITCHFIELD,
Health Officer.

GRANT COUNTY.

There have been no epidemics during the year and the general health has been what might be termed good. It will be remembered that typhoid fever was very prevalent in Marion in 1900, but there were only a few cases this year. Measles was epidemic in several portions of the county during the earlier part of the year. This disease should be looked after more carefully for it is quite as dangerous to the lives of children and as fruitful of deleterious after-effects as scarlet fever. Tuberculosis is always present with us and reaps its harvests of death each year. It is a comment upon our bad management that nothing is being done toward the prevention of this disease.

The total number of school buildings in the county is 114. Most of them are frame and all too many are in a dilapidated and unsanitary condition. We have, however, many very excellent schoolhouses. Of the 114 buildings, 76 have their water supply from driven wells, 8 from dug wells and 11 have no wells at all. All of the dug wells should be condemned, and I have no doubt, analyses would prove that some of the driven wells do not furnish pure water. The outhouses are generally in very bad sanitary condition. Strict supervision should be made of the schools in this regard. Next year closer attention will be given to the sanitation of the schools in this county. Several buildings have been constructed in various parts of the county, and, in rare instances, sanitary

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features have been carefully looked after. The Orphans' Asylum is an excellent building and is passably sanitary. It is excellently kept. There is practically no fire protection. I have made several recommendations concerning this building, which I hope will be heeded. One jail was built in 1869. The county now has three times the population it had when the present jail was built. There were committed to the jail of this county during the year 1901, 1,934 persons, 1,873 being males and 61 females. This gives an average number each day of over 50 men being confined in a jail built for 11. This is, of course, all wrong, and this bad sanitary feature, in addition to many others, has been carefully presented, with recommendations, to the authorities. A new jail is necessary, and, undoubtedly, will very soon be built. The poorhouse, from a sanitary standpoint, is much improved over what it was last year. New waterclosets and bath-tubs have been installed in the main building. Complete separation of the sexes is now provided for. The institution is well kept. Many recommendations concerning the management of the poorhouse and the improvements which are necessary, have been made to the proper authorities, and we hope next year to be able to report still further improvement. I have visited all subordinate Health Officers and inspected their books. I find the said subordinate Health Officers to be attentive to their work and their books are in good condition. With one exception, however, they have failed to file any report with this office. This is due more to misunderstanding than to any other cause. The Health Officer at Fairmount has filed a report to his Board that is a model.

During the year we have had two outbreaks of smallpox. The first consisted of a single case in Pleasant Township. The second outbreak was in the village of Sweetzer. There were 14 cases in all. The source of contagion was from Jackson County, the result of a visit of a family living in Sweetzer to friends. There were no deaths and no severe cases. None of those who were attacked were ever vaccinated. A family going from Sweetzer, before the epidemic was reported, to Pleasant Mills, in Adams County, carried the disease with them, for smallpox developed at the last named place. Much good sanitary work has been done in the unincorporated town of Matthews. The streets have been cleaned, vaults emptied and the people instructed in sanitation.

A. E. POWELL,
Health Officer.

GREENE COUNTY.

This county has an area of 540 square miles, is hilly and undulating, and hence the drainage is very good. There are numerous springs of pure water. In late years many drains have been built and with the abolishing of wet and marshy land the general health has improved. I think the gravel roads, of which 100 miles have been built, have also added somewhat to the health of the county. The number of schoolhouses is 140. The sanitary condition of most of them is fairly good. Ventilation, however, is not what it should be. There is much improvement to be made along the line of sanitation in the schoolhouses. Recommendations have already gone forth to the school authorities in regard to this mat-

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ter. No schools were closed during the year on account of infectious diseases. Smallpox appeared in one family in the eastern part of the county. Diphtheria, in one family, was traced directly to the disease in cats. Tuberculosis is the dreaded scourge of this county. The people should be instructed in regard to this disease, but funds for that purpose are very hard to secure. The county poorhouse is a two-story brick building on a high ridge. It is beautifully located. There are 16 rooms and it is in fair sanitary condition. The water supply is from two cisterns, and it is heated by a furnace. There was no serious sickness during the year. There are some chronic cases. There was one death in the institution from old age and debility. The jail is built of brick, has 2 rooms and 6 cells. It is heated by stoves, the water supply is from cisterns, which sometimes go dry. The sewage disposal is very faulty. Recommendations have been made to the proper authorities in regard to this institution and also in regard to the schoolhouses, the poorhouse and the courthouse.

W. H. COLE,
Health Officer.

HAMILTON COUNTY.

Three hundred and seventy-one cases of infectious diseases were reported during the year. This is nearly 200 more than were reported for 1900. The increase was largely due to measles. We have some schoolhouses which are in very poor sanitary condition, but there is steady improvement in this line. Two schoolhouse wells have been condemned during the year and pure water supplies furnished. There is an improvement in the sanitary condition of the county jail over last year. Painting has been done and the sewer system repaired. The poorhouse is in better condition than last year. An additional building will be erected before the year is out, as $6,000 have been appropriated for that purpose. There was one case of smallpox reported during the year.

E. C. LOEHR,
Health Officer.

HANCOCK COUNTY.

Population of the county, 19,189. The incorporated towns are Greenfield, population, 5,000; Fortville, population, 1,000; New Palestine, population, 600. Greenfield has first-class sanitary arrangements. There is an excellent system of sewers and an abundant supply of water obtained from wells 400 feet deep. The courthouse is a new and modern building. All sanitary conveniences exist in the building. The county jail is a brick building and has twenty-four cells. The sexes are thoroughly separated. Sewerage is good, the ventilation passable; but it is heated with stoves. There has been no sickness and no deaths in the jail during the year. The poorhouse is a brick building; it was erected in 1884. The inmates number twenty-seven—males fourteen, females thirteen. The building is heated by natural gas. Water supply is from dug wells. Sewerage is very good. The building is not modern. The bathtubs, two in number, are in bad condition. The building is very well kept. There are eighty-seven schoolhouses in the county, all but a few in good sanitary condition. No

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schools closed during the year on account of infectious diseases. On May 6, a case of smallpox was reported six miles south of Greenfield. All well persons in the family were immediately vaccinated. In ten days, the oldest girl, age seventeen, developed the disease, but at no time was confined to her bed. Both cases made rapid recovery and no other cases occurred. There were eleven in the family. These were all the cases which occurred during the year.

J. W. SELMAN,
Health Officer.

HARRISON COUNTY.

There was no marked epidemic in Harrison County in 1901. The cases of typhoid seem fewer than in the preceding year, and this may also be said of scarlet fever and diphtheria. It may also be said that all cases of these diseases were, as a rule, of mild type. The total deaths numbered 290 during the year, which makes a death rate lower than that of the State. The sanitary condition of the county asylum is, at this time, better than ever before in its history, and the same may be said of the county jail. Progress has undoubtedly been made in sanitation in Harrison County in 1901.

WM. DANIEL,
Health Officer.

HENDRICKS COUNTY.

We have had three outbreaks of smallpox during the year; two of these did not spread beyond the families in which they were discovered. We unfortunately got hold of some worthless vaccine, and a second outbreak was not so easily controlled. There were twenty-three cases in the second outbreak—all recovered. There were thirty cases of typhoid fever at the Reform School during the year. The source of the disease was traced to the bathing pool. This pool was formed by damming the creek. Analyses of the spring water supplied to the school shows that it is pure. After the abandonment of the bathing pool no more cases occurred. There were seven deaths in this outbreak. There were a few scattered cases of scarlet fever and diphtheria during the year. Two schools were dismissed for a short time to prevent the spread of this disease. Measles have existed quite extensively during the year. Most of our schoolhouses are in passable sanitary condition. Some are dilapidated and very unsanitary. Slow improvement is being made. The water supply of schoolhouses is universally good, being from driven wells. I know of twelve schoolhouses which should have a new water supply. The courthouse is well kept, but is an old building and was not constructed with sanitary ideas in view. The Orphans' Home is an old building and is kept as well as possible under the circumstances. It is not sanitary in many particulars. The jail is faulty in its sanitary characters.

W. J. HOADLEY,
Health Officer.

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HENRY COUNTY.

There were few cases of communicable diseases during the year in Henry County, but there was no outbreak which could be truthfully called an epidemic. Consumption, of course, was with us, but this disease is always epidemic. A few cases of smallpox in different parts of the county are to be mentioned, but all of them were very mild. The various Health Officers of the county have been very active and have faithfully performed their duties. I made 10 sanitary inspections during the year and in each instance the unsanitary conditions complained of were put to rights. The county asylum is not an old building and is fairly sanitary. It is well kept. The jail and courthouse are of recent construction, are well kept and passably sanitary. We have many schoolhouses which are very unsanitary, but the new ones which are built conform to the best sanitary conditions. The city of Newcastle, the capital of the county, is situated on high ground and has excellent drainage. The public water supply is good and there are no epidemics to record for the year.

E. T. MENDENHALL,
Health Officer.

HOWARD COUNTY.

The school buildings of Howard County are, many of them, passably satisfactory from a sanitary standpoint. There are many, however, which are old and dilapidated and should be condemned. The water supply at every schoolhouse is from driven wells and presumably good. Inspections and recommendations in regard to schoolhouses are constantly being made. The county poorhouse was erected in 1873. It is brick and stone with slate roof. It is heated by hot air, but there is no special provision made for ventilation. The sewerage is good. There was very little sickness during the year, but there were 5 deaths, all of them on account of old decrepitude. The institution is very well kept. The Orphans' Home is constructed of brick and stone with shingle roof. It has a basement with cement floor and is heated by gas stoves. The water supply is from the Kokomo City Water Works. The building is equipped with sanitary closets. The building is old and not first-class. The County Council has made an appropriation for remodeling. There were 56 inmates during the year, with one death, and a very limited amount of sickness. The jail was erected in 1882. The sanitary conditions are not first-class. The sewerage is bad, the closets are not modern and there is no bathroom. No special provision for ventilation. Remodeling of the jail is under consideration. There were 637 prisoners during the year, but no serious sickness and no deaths. There was an epidemic of measles during the year, but no other infectious diseases unless the 32 cases of smallpox we had may be called an epidemic. No smallpox deaths occurred. Complaints have been received in regard to adulterated food, and one complainant presented canned goods which certainly were spoiled and of poor quality. Complaints were also made of adulterated milk, lard, butter, vinegars and syrups. There is no possibility of enforcing the pure food law unless a laboratory is established by the State. There were 546 births

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during the year—275 males and 271 females. The number of deaths were 365; of these 48 were from consumption, 19 from cancer, 11 from typhoid fever, 5 from lagrippe, 15 from pneumonia. Diphtheria was reported as causing but one death. There were 332 marriages during the year.

R. H. SMITH,
Health Officer.

HUNTINGTON COUNTY.

None of our public buildings were constructed with sanitary principles in mind. They are all, however, well kept and all need repairs and improvements. No deaths from diphtheria, scarlet fever or measles are to be recorded for the infirmary, jail or Orphans' Home during the year. Most of the schoolhouses were constructed without considering sanitation. All but a few are well kept and improvement is apparent each year. We had three cases of smallpox during the year, but the disease has not been epidemic. No epidemic of diphtheria or scarlet fever has occurred, but there have been a few isolated cases. Typhoid fever is rarely heard of in Huntington County.

CHAS. L. WRIGHT,
Health Officer.

JACKSON COUNTY.

Jackson County contains about 500 square miles. It is drained by White River and a few small streams. Ordinary drainage has improved the health in Jackson County very materially. The water is good and is obtained by driven wells. There are a few dug wells which are being abolished as rapidly as possible. The courthouse, jail and poor asylum are in passable sanitary condition. They are all well lighted, heated and ventilated except the jail. The sewerage of the jail is not what it should be. There were 65 inmates in the poor asylum during the year—38 males and 27 females. There were 7 deaths, all of them among people of advanced years. There are very few strictly sanitary school buildings in the county. I do not know of one single building of this character which is all it should be. There is well-directed and intelligent effort on the part of the teachers to ventilate properly and to furnish uniform temperature. These conditions, however, can be secured only to a limited degree in many instances. Improvements in the sanitation of schoolhouses is not as rapid as might be hoped for. There were 12 cases of smallpox during the year, 8 in one family. There were no smallpox deaths. Not one of the persons attacked had ever been vaccinated and all the exposed people who were vaccinated and in whom successful "takes" were secured, did not take the disease.

The sanitary conditions of the city of Seymour have been much improved. Drainage and sewerage has been extended and streets have been paved. There have been a few cases of typhoid fever, but no deaths. Brownstown, the capital, has natural excellent sanitary conditions. It is situated on high, rolling, sandy ground. The water supply is obtained from driven wells. There is no sewer system. There was an epidemic of measles and whooping cough at Brownstown during the year. There has

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been a marked advancement in sanitary matters in Crothersville in the last year. The attention of the town authorities has been called to the importance of sanitation and many good things have been ordered, such as cleaning alleys, emptying vaults, etc.

D. J. CUMMINGS,
Health Officer.

JASPER COUNTY.

There have been no epidemics during the year. There were a few cases of scarlet fever and diphtheria, but all were in isolated places and the disease has not been allowed to spread in any instance. The water supply of the county is usually from deep driven wells. This may probably be the reason why we have so very few cases of typhoid fever. There were 16 cases of smallpox during the year, with no deaths. In one family, where 8 of the cases occurred, only 1 member escaped, and she had been successfully vaccinated at school. The county poorhouse is old and not constructed with sanitary principles in view. Better sewerage is needed. Closets and bathrooms should also be supplied. Nunber of inmates during the year, 12; no deaths, and very little illness. The county jail is heated by a furnace. Water closets need repairing, and ventilation should be improved. The sewer system of Rensselaer is passably good, but many improvements are necessary. It is hoped this will be made very soon in the future. The schoolhouses of the county are mostly in poor sanitary condition. With few exceptions, they are well kept. The new buildings being constructed generally comply with the proper sanitary laws.

E. C. ENGLISH,
Health Officer.

JAY COUNTY.

There are 120 schoolhouses in this county—99 brick and 21 frame. Most of them are heated by stoves, ventilated by windows and doors. The cross-light system of lighting has been adopted in most of our school buildings. The outhouses are generally bad. The water supply is from driven wells. Recommendations as to sanitary needs have been made to the proper authorities where called for. There is an improvement to record at the county poorhouse. A new Superintendent has been installed and keeps the premises in much better sanitary condition. The building, however, is old, and many recommendations were made. Our jail is a new and modern building with all sanitary improvements as to light, heat, ventilation, bathing, sewerage, isolation of sick persons and the treatment for women prisoners. Our courthouse is an old structure. The Salamonia River runs through Jay County from southeast to northwest. Its flow is obstructed in numerous places by driftwood and willows, and, after very heavy rains, considerable areas of land are covered. This is not conducive to good health. The river flows through the corporate limits of Portland, the county seat. It is a very shallow body, and is stagnant and receives the sewerage of the town. This river should be improved for sanitary as well as for farming reasons. Jay County is well drained with tile and open ditches and there are very few stagnant ponds. There were reported 538 births- 314 males and 269 females. Six hundred

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and forty cases of infectious and contagious diseases were reported. Of this number 599 cases were measles. There were 9 cases of diphtheria, 17 of scarlet fever, 11 of typhoid fever and 4 of smallpox. There were no deaths from smallpox.

J. G. ROSS,
Health Officer.

JEFFERSON COUNTY.

From general observation and a review of records, I am able to say that the general health of the people of Jefferson County was good during the year 1901. The general sanitary conditions are fair. Of course, there are to be found many homes which are very unsanitary. Excepting smallpox we have had no epidemic of contagious disease. Of this disease there have been 98 cases during the year, distributed as follows, by months: January, 1; April, 6; May, 2; June, 4; November, 25; December, 60. Most of these cases have been in the country and in little hamlets. In the city of Madison there have been very few cases and easily controlled because they were immediately sent to the pesthouse, and the homes of the patients immediately disinfected. It has been more difficult to handle the disease in the country than in the city and I believe that if the county had a contagious disease hospital, as the city has, we could much more successfully combat the disease.

The health in our public institutions has been quite good. During the year improvements were made in the jail, Orphans' Home and poor asylum. These improvements have greatly bettered the sanitary conditions. All new schoolhouses in this county are built to conform to sanitary demands. All the old schoolhouses are very unsanitary.

H. S. HATCH,
Health Officer.

JENNINGS COUNTY.

No epidemics have occurred during the year. The general sickness has been very little. There have been a few cases of typhoid, scarlet fever and diphtheria. The people generally are discovering that it is possible to prevent certain diseases, and this is very encouraging. There were 3 cases of smallpox during the year, all occurring in one family. The greater proportion of our schoolhouses are unsanitary and should be condemned. Our County Superintendent, M. W. Deputy, is tireless in his efforts to secure better schoolhouses. Four new sanitary schoolhouses have been erected during the year. The county jail is very unsanitary. It should be entirely abolished and a new one constructed. Our county poorhouse is in only fair condition. I have made recommendations to the authorities in regard to better sanitation of all school buildings, the jail and the poorhouse.

W. J. MITCHELL,
Health Officer.

JOHNSON COUNTY.

There have been no epidemic outbreaks of infectious diseases during the year. Two county schools have been dismissed on account of scarlet fever, but in neither of these instances was there an epidemic and the schools were dismissed out of abundant caution. Most of our country

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schoolhouses are unsanitary. The warming, the ventilation and the lighting is wrong in every respect. We hope gradually to get this matter righted. The Orphans' Home has 22 inmates and the general health has been unusually good. The building is heated with a furnace and the general sanitation has been much improved. Further improvements have been recommended. The poor farm is in better sanitary condition than last year. In accordance with the recommendations of the Health Department, better drainage has been supplied to this institution and bathtubs have been put in. The heating facilities are still not what they should be, but will be corrected in a short time. There are 18 inmates, 16 of them epileptic or of unsound mind. The county jail has received a new coat of paint. It is kept scrupulously clean and provided with good drainage, but the ventilation is not satisfactory. The courthouse is in only passable sanitary condition.

CLARENCE PROVINCE,
Health Officer.

KNOX COUNTY.

The schoolhouses of Knox County are generally very unsanitary. Indeed, there are very few that are even passably sanitary. Some of the new buildings are built according to modern ideas. I am sorry to say that some schoolhouses are badly kept, but the most of them I believe to be well kept. Many suggestions have been made to school authorities and some of these suggestions have been followed out. The county has about 33,000 inhabitants and there were 511 deaths last year. Some important causes of death were typhoid fever, 25; tuberculosis, 54; diphtheria, 8; scarlet fever, 2; measles, 1. There was an epidemic of diphtheria at Vincennes and also in the southern part of the county during the year. Prompt quarantine and proper sanitary precautions seem to have limited its spread. A few cases of smallpox appeared, but all were mild, and there have been no deaths to date. The exact number can not be stated because some of the cases were so mild that physicians were not called. The jail is an abomination. It is unnecessary to describe it in detail. The Board of Authorities has condemned the structure, and a new building will be erected within another year. The courthouse is an old building with no special precisions for ventilation. The water supply of Vincennes is taken from the Wabash River. Last year it developed a very bad odor and taste and could not be used for household purposes. By investigation it was shown that this odor was due to the decomposition of putrefactive decay of masses of algae. The occurrence seemed to have no effect upon the public health.

The Vincennes Water Company has an excellent filter plant, where all the water furnished to the city is filtered. This, however, did not prevent the growth of plants in the mains which, upon decaying, gave forth the bad odors. Vincennes sadly needs sewers and paving. These are talked about almost every year, but it remains to be seen whether anything will be done.

LYMAN BECKES,
Health Officer.

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KOSCIUSKO COUNTY.

It may in general be said that the sanitary conditions of Kosciusko County are fairly good. We have some old time schoolhouses which are very unsanitary, and only a few of the school buildings are provided with special ventilating methods. The new school buildings are provided with all needed sanitary improvements. The county infirmary is a new building and up-to-date in every respect. It is well ventilated and is heated by steam. The water supply is from deep wells and the sewer system is very good. The house is well kept. The city of Warsaw is in good sanitary condition. A new sewerage system has just been completed. The jail and the courthouse are stone buildings, having the latest sanitary improvements. Both are connected with the new sewer. There was very little sickness throughout the county during the year and no epidemics of any kind. Smallpox appeared November 26. There were 64 cases in all. There was much difficulty experienced in inducing the people to be vaccinated. A county pesthouse was established and by means of it good prevention work was accomplished. The business men gave their hearty support to extinguishing a smallpox outbreak.

J. M. BASH,
Health Officer.

LAGRANGE COUNTY.

The number of deaths in Lagrange County in 1901 was 207, making a death rate of 13.5, which is one less than the rate for the whote State. Eight per cent. of the total deaths were of infants under one year. Consumption caused 20 deaths; cancer, 14; pneumonia, 15; heart diseases, 26; apoplexy and paralysis, 18. There were reported during the year 20 cases of diphtheria, all in the south part of the county, and during the year 82 cases of scarlet fever were reported. There were 28 cases of typhoid fever and the usual minor contagious diseases prevailed in moderate degree.

Most of the schoolhouses of the county are unsanitary and it is only a few that are not well kept. Only in about half of the cases are the wells a part of the school property, and in the other half, the water is secured from adjoining private wells. The heating of schoolhouses is done by stoves and the ventilation by windows and doors. This is, of course, unsanitary, but the new school buildings which are being constructed from this time one will conform to sanitary conditions. The courthouse has recently been renovated and supplied with new sanitary arrangements. The county jail is well kept, but badly needs better sanitaries. The main building of the county infirmary is in good condition and very well kept, but there is urgent need for improved sanitary features in the outside buildings. The Orphans' Home is well kept, but when constructed sanitary principles were not fully included.

D. W. DRYER,
Health Officer.

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LAKE COUNTY.

I have made a careful survey of Lake County, having visited all of its town and villages. A general order to local health officers resulted in cleaning up all of the towns of the county. The county is well drained and there are now very few swampy places to be found. The county jail and courthouse are in fairly good sanitary condition and are well kept. The sewerage for these institutions is not what it should be, and recommendations have been made in this respect and also in respect to better ventilation. They are well kept. At the poorhouse no patient is taken until it is certain he or she is free from transmissible diseases. I visited a number of schoolhouses and lectured to the school children on "Hygiene and the Prevention of Infectious Diseases." I found the schoolhouses not to be sanitary structures. Those who built them evidently had no ideas in regard to sanitation. Schoolhouses are generally well kept. Many improvements have been recommended to the proper authorities. The city of Hammond needs many sanitary improvements. The river at this point is badly polluted and surely is not a source of health. Our public buildings contain the latest sanitary improvements, and are passably well kept. There is a force continually at work cleaning the streets and alleys. There were four cases of smallpox during the year at Hammond, with no deaths. There were a few cases of diphtheria and no deaths. At East Chicago there is no sewer system. The town is kept passably clean. There is much, however, to be done from a sanitary standpoint. A sewer system, with public water plant, is under contemplation. Four cases of smallpox occurred during the year, no deaths. There were two cases of diphtheria and scarlet fever. Sanitary conditions at Whiting have greatly improved during the year. A main sewer has been built with several laterals. Some of the streets have been graded with cinders and the main street is stone-paved and has asphalt guttering. Several miles of new sidewalk have been constructed. The water supply is from Lake Michigan and is believed to be good. Occasionally, however, it is probably polluted by sewerage from Chicago and the Standard Oil Company plant. The sanitary conditions of the town hall and town jail are bad. The sanitary situation at Lowell is very good. The streets are clean and recently authorities have ordered the vaults cleaned and disinfected. There is no sewer system. The public school building is well lighted and ventilated and is well kept. There has been no smallpox in this town. A few cases of diphtheria and 10 cases of typhoid fever during the past year, but no deaths from other diseases. Ther were over 300 cases of malaria with no fatalities.

JOSEPH VON OSINSKI,
Health Officer.

LAPORTE COUNTY.

No extended outbreaks of epidemic diseases during the year. There have been a few widely separated cases of diphtheria. Scarlet fever has prevailed somewhat in a few localities and generally in light form. Diphtheria and scarlet fever each caused one death during the year. There were 17 cases of smallpox during the year, with no deaths. Malaria in-

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creased over the preceding year and typhoid decreased. The jail is an old one and should be replaced with a new structure. It is kept in as clean a condition as possible. The poorhouse is a new building and a model of neatness and cleanliness. There are 60 inmates. It is well ventilated and well sewered and has a good water supply. The Old Ladies' Home has 20 inmates. It is well kept, but is not built with all sanitary principles included. Some of the schoolhouses are unsanitary and a few are old and dilapidated. There are only a few school buildings in the county in which sanitary conditions have been followed. The water supply of the county building is from deep wells and the water is excellent. Laporte has a good sewer system and public buildings are connected therewith. Garbage is cremated. The slaughter houses, which heretofore have been a source of much trouble, are now under control and little or no complaint is heard concerning them. There is less trouble in collecting records of births and contagious diseases than formerly.

O. L. SUTHERLAND,
Health Officer.

MADISON COUNTY.

The population of Madison County is about 75,000. There are many foreigners being attracted by the factories. These foreigners are disregardful of sanitary laws, and most of them have an antipathy toward cleanliness. There were 1,027 deaths in the county during the year, making a death rate of 12 per 1,000. The greatest morality was from tuberculosis, namely, 134; 125 of these were of the pulmonary type. Diarrhoeal diseases caused 88 deaths, most of the cases occurring among infants and children. There were 79 deaths from pneumonia during the year, 72 still-births, 59 from violence, 36 from typhoid fever, 20 from diphtheria, 17 from scarlet fever, 21 from meningitis, 6 from whooping-cough, 18 from influenza, 1 from measles and 2 from smallpox. There were reported 99 cases of diphtheria, 195 cases of scarlet fever, 42 of smallpox, 91 of typhoid fever. I believe a number of typhoid cases were not reported. Smallpox appeared in the county in March at Ingalls. Thirty-six cases were directly traceable to one man, who traveled in the county considerable in the eruptive stage of the disease. This man's trip through the county, leaving, as described, a trail of smallpox, entailed an expense of about $3,200. The natural drainage of the county is very good. Many of the factories pollute the streams with their refuse. The American Tin Plate Works deposits into a small creek which, in turn, runs into White River, several tons of copperas daily. This copperas is called "spent pickle" and is formed by dipping the steel plate into dilute sulphuric acid. All of the sewage of the city of Anderson is deposited in White River, also the refuse from the American Strawboard Co., an enormous concern, which pumps 2,000,000 gallons of water daily. The river is undoubtedly polluted at this point. The courthouse is a good building, but the sewerage is bad. This will soon be remedied. The sanitary condition of the building is good. The county jail is unsanitary on account of poor ventilation and bad plumbing. The building has been frequently cleaned, whitewashed and disinfected. It is too small for the number of prisoners confined there. A new and more commodious building will probably

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be very soon constructed. The sheriff keeps the jail in as good condition as he can possibly do under the circumstances. The poorhouse is a model institution. It is roomy, well lighted and ventilated and splendidly kept. The Orphans' Home is in fair sanitary condition and well kept, but is too small for the number of inmates. The building will very soon be enlarged. Most of the school buildings in the county are constructed of brick and are heated by natural gas. In the cities of Anderson, Elwood and Alexandria are well lighted and well ventilated. This can not be said of the country schoolhouses.

S. C. NEWLIN,
Health Officer.

MARION COUNTY.

This is my fourth annual report, and I am happy to be able to state that better sanitary conditions exist in Marion County than at any previous time. That the people are arousing to the importance of sanitation is proved by the fact that frequent letters and frequent calls are made upon me on account of health matters. During the year there were 217 cases of diphtheria, 251 scarlet fever, 138 smallpox, 2,162 measles, 180 typhoid fever reported. The county jail is a new structure and when built all new modern sanitary conditions were incorporated. It is splendidly kept. The workhouse is in good sanitary condition. The drainage is excellent; baths, closets and other sanitary surroundings are all that should be expected in such a place. A new hospital has been erected a short distance from the main building, at a cost of about $5,000. It will accommodate about 15 patients. The hospital is not perfect in its sanitary arrangements, but it is passably so. The old bathtubs have been abolished and shower baths substituted. The poorhouse has 188 inmates—151 males and 37 females. The sanitary condition is not good, and under the present condition of things it is impossible to make it even passably sanitary. The building is old, not properly constructed and is entirely out of date. A new building must very soon be erected. The Orphans' Home is scrupulously clean and admirably conducted. The sanitary arrangements are very good. The building is supplied with good drainage, closets and bathrooms. The institution for the incurable insane is located at Julietta. This is a new building and contains all sanitary improvements. There are 113 patients. The German Orphans' Home, under the management of Mr. Roesner, is well conducted. This institution, unfortunately, has no connection with the city sewer system. The ordinary dug closets are used and must be cleaned several times a year. Better ventilation should be provided. There is an improvement to be recorded in the dairies of the county over a few years ago. Constant inspections will be made and I will have to record still greater improvement next year. One by one the old school buildings of the county are giving away to more modern structures. There are yet too many old-time, lily-ventilated, poorly-warmed and wrongly lighted schoolhouses. There were 427 deaths reported as caused by tuberculosis in Marion County during the year. There is probably no decrease in this disease and it is possible there is an increase. It is to be hoped that the Health Officers will, ere long, be permitted to take proper steps in the line of preventing consumption. A great deal of education will be necessary before this admirable end is accomplished. We go to enormous

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expense to properly prepare for the insane; we abundantly care for the poor, and even the criminal receives our sympathetic consideration, but the unfortunate sufferer from chronic tuberculosis finds no place but the open grave, and in his hopeless condition he often prays that he may be allowed to go and rest there in peace.

H. W. RIDPATH,
Health Officer.

MARSHALL COUNTY.

I have inspected or had inspected by deputies all of the schoolhouses in the county. Very few of them are what they should be. Very few have been built with any sanitary idea in view. In only two instances were poorly kept schoolhouses found. The water supply was found good and in every instance driven wells are used. Recommendations have been made to the proper authorities where sanitary deficiencies were found. The sanitary conditions of the courthouse are passably good. The building is brick and stone and is well kept. The ventilation is by windows and doors, no special ventilating system having been installed. The sanitary conditions of the jail are passably good. The drainage is not exactly what it should be, but the place is well kept. The health at the poorhouse might be termed good, as there has been no serious sickness during the year. The sanitary conditions are passable. A better system of abolishing closets is to be desired, and the same has been recommended. There have been no infectious diseases at the Orphans' Home. The sanitary conditions are passable. No epidemics have prevailed in the county during the year. There were a few cases of diphtheria at the town of Bourbon during the winter. This disease also prevailed slightly at Culver. Diphtheria has been reported from four points in the county besides those named, but they were all single cases. No scarlet fever reported for the year. There were 23 cases of smallpox during the year. About four miles west of Plymouth, 4 cases appeared in one family. Nine persons were exposed to the first case. All nine were promptly vaccinated and six developed good vaccination and went free without coming down with the disease. The other three vaccinations did not take and these three came down with smallpox in modified form. No deaths from smallpox during the year. The County Board of Health has passed special rules concerning sanitary conditions at Lake Maxinkuckee. These rules aimed at preserving the lake and immediate surrounding grounds from infection of any kind.

L. D. ELEY,
Health Officer.

MARTIN COUNTY.

Malarial fever has been less in the last year than for several preceding years. Typhoid fever was altogether too prevalent. Twenty-five cases of dysentery were reported from the various sections of the county, with very few fatalities. There were only a few cases of scarlet fever and diphtheria throughout the whole year. All houses visited by infectious diseases are promptly disinfected at proper time. In one instance, where diphtheria had existed in a log hut, the said hut and contents were

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burned. It was impossible to affect a disinfection and burning was the only remedy. The reports of teachers show the health of school children to have been exceedingly good. Our schoolhouses are kept passably clean, but the heating and ventilation is bad, inasmuch as the buildings were not constructed with the intention of furnishing a uniformity of heat and air. The high school building at Shoals is new and is built in accord with sanitary requirements. The water supply is from a drilled well, 150 feet deep, and the water is of excellent quality. The drainage is excellent, as the building is located on a high bluff on the river bank. The jail is in very good condition. The drainage is excellent, but the building is not constructed in conformity with sanitary principles. Disinfectants are liberally used and the inmates are compelled to admit abundant air. The courthouse is well kept, but is not a modern building. The poor asylum is a large two-story frame structure, is rather old and in bad repair. Every effort is made to keep it as clean as possible. It was repainted last fall and thoroughly cleaned and the grounds ditched and tiled. There were 8 deaths at this place in the past year, but they were all old persons who died of general debility. The inmates have a change of clothes and bed clothes twice a week and are required to take a bath once a week. The house is well ventilated, as the heating is accomplished by means of large fireplaces.

E. E. LONG,
Health Officer.

MIAMI COUNTY.

The sanitary conditions are much improved over last year. During the month of October there was an epidemic of diphtheria, 25 cases were reported, with 2 deaths. During the other eleven months 28 cases were reported, with 4 deaths. Antitoxin is pretty generally used. One school building was closed for about two weeks on account of diphtheria. This was in the city of Peru. There were 27 cases of scarlet fever reported during the year, with 2 deaths. Measles existed for a greater part of the year and over 300 cases are reported. Of course, many cases were not reported.

The schoolhouses of Miami County are in passable sanitary condition. There are a few which sadly need repairs and renovation, but this will be attended to for 1902. On several occasions the schools of Peru were closed for want of sufficient heat to make the rooms comfortable. I can secure no good explanation why the rooms are not properly heated. There has been no smallpox in Miami County during the year. There were several cases of typhoid fever in the city of Peru, but no deaths. Peru is well drained and most of the inhabitants are supplied with water from the city waterworks. This public supply is from deep wells drilled into limestone for a depth of 350 to 365 feet. Twenty-one of these wells now supply the city. There is certainly progress in sanitary matters in Miami County. We have a new jail, which is modern in every respect. Our old courthouse is not sanitary. The poorhouse is not all that it should be, but is as well kept as the circumstances will permit.

A. H. KALBFLEISCH,
Health Officer.

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MONROE COUNTY.

Monroe County has about 22,000 inhabitants and there were 295 deaths during the year. Some important causes of death were: Typhoid fever, 11; tuberculosis, 36; diphtheria, 2; scarlet fever, 1; measles, 1. There was a small epidemic of smallpox during the year at Bloomington. There were 12 cases in all, but no deaths. While there were a few cases of scarlet fever and of diphtheria, nothing like an epidemic occurred. The courthouse is an old and dilapidated structure, is unsanitary and is badly kept. The public school at Bloomington presents bad conditions. The hitching rack where farmers' horses are tied, brings an enormous amount of filth to the square, and in addition, there is a noisome closet close by the courthouse. There should be a new courthouse in this county and sewers should be constructed for Bloomington. The disposal of sewage in Bloomington at the present time is by means of vaults and the water supply is from driven wells into the same earth. The Bloomington jail is a bad structure, but a new one is soon to be constructed. The poorhouse is unsanitary, but well kept, and recommendations have been made for its improvement. The general health of the community during the year has been good.

F. F. TOURNER,
Health Officer.

MONTGOMERY COUNTY.

I am confident there is an improvement in sanitary affairs in Montgomery County. With rare exceptions all new private dwellings are better built than formerly and all the public buildings rigidly conform to sanitary laws. Five cases of smallpox were reported during the year, 33 of typhoid fever, 9 of scarlet fever and 2 of diphtheria. Our courthouse and jail are in good sanitary condition and are well kept. The same may be said of the poorhouse. Dr. Taylor, Health Officer, of Crawfordsville, has been untiring in his efforts to improve sanitary conditions in his city. A comprehensive sewer system has been constructed and an ordinance passed controlling the meat supply. This ordinance abolished several nasty old slaughterhouses and now a modern abattoir has sprung up instead.

PAUL J. BARCUS,
Health Officer.

MORGAN COUNTY.

Excepting typhoid fever, we have not had many cases of transmissible diseases in this county. No smallpox has been reported. Sanitary conditions throughout the whole county have been greatly improved in the last year, especially in the city of Martinsville. This city has put in a complete system of sewers and has an excellent water supply. The heating of the courthouse is with steam and the jail with furnaces. A sanitary method of garbage disposal is much needed in Martinsville. The public hall is poorly heated and ventilation is bad. It is dirty and not a fit place for a public gathering. The county poorhouse is well situated. The building is of brick, heated by hot-air furnaces. New furniture has recently been supplied and paint and papering has been pretty general. Cement floors

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have been recently put in the basement. The much needed repairs to the bathrooms have not been made. Two deaths occurred during 1901. There are 107 schoolhouses in Morgan County—79 brick and 28 frame. All are in fair condition, except 5, and these will be placed in condition before they are used next year. A new school building in Martinsville was erected this year at a cost of $18,000. It is modern in every respect. A $6,000 four-room schoolhouse is in course of erection in Adams Township. The plans for it show that all sanitary conditions are complied with. In August I visited Morgantown where typhoid has prevailed unusually. I found 9 cases in different stages. The water supply is from shallow dug wells. There are but two driven wells in the town. Every township in the county has been visited by this disease. The total number reported was 59.

A. S. TILFORD,
Health Officer.

NOBLE COUNTY.

Noble County, by the last census, has 25,533 inhabitants and there were, during the year, 300 deaths. This is an annual rate of 12.7. The annual death rate for the whole State was 14.5. Smallpox prevailed to a considerable degree, but the exact number of cases will never be known. This is because many physicians were unable to diagnose the disease, or at least they continually called it chickenpox, impetigo, etc. There have been no deaths to record from smallpox. Typhoid fever has prevailed about as usual, and this means that it has been all too prevalent. Diphtheria and scarlet fever and the minor contagious diseases, namely: mumps, measles, etc., have been somewhat in evidence, but have not proved very destructive to life. The health of the county, with the exception of smallpox, has not varied over the preceding year.

The sanitation of Sylvan Lake, at Rome City, has received considerable attention from the Board. Complaint had been received from there to the effect that unsanitary conditions prevailed and an inspection proved this to be true. Rules and regulations were issued by the Board which were very specific in their requirements as to the disposal of excreta and garbage. Much opposition was developed among certain dwellers at the lake, but on the whole, satisfactory results were obtained. We hope to secure better results next year.

Most of the schoolhouses of Noble County are unsanitary. They are heated by stoves, ventilated by windows and doors and lighted on two sides. In some instances the water supply is not what it should be, and in other instances is absolutely unusable. In all but two instances the sanitaries are undescribable and wholly bad. The courthouse and jail are new structures, are constructed with modern sanitary arrangements and are well kept. The poorhouse and the Orphans' Asylum are well kept, but are far from being as sanitary as they should be. The County Board of Health is alive to defective conditions and improvements will be made as rapidly as possible. There were 377 births reported during the year, 92 cases of infectious diseases, 180 marriages and 300 deaths.

Kendallville.—This city of Noble County has 4,000 inhabitants, and a review of the records shows it to be very healthful. The city has a complete sewer system and vaults are being gradually abolished. In eight

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years there has not been a case of typhoid fever in any home supplied with city water. This speaks well for the public water supply. There were 37 deaths during the year, and of contagious diseases there were reported: Scarlet fever, 9; measles, 6; diphtheria, 2; typhoid fever, 2. There were 40 births. The North Ward schoolhouse, finished last year, is a model building in every way. The Health Department is provided with a formaldehyde generator and thorough disinfection of all houses visited by infectious diseases is practiced.

Ligonier.—There were two slight visitations of diphtheria and one death during 1901. There was one case of scarlet fever. During the previous year there were 29 cases and no deaths. There were 4 cases of typhoid fever, mild in type, excepting one case, when death occurred. Sanitary conditions are being improved continually. People are learning the benefits of sanitation and applying their knowledge.

Albion.—There has been no epidemic of infectious diseases in Albion during the year. There have been a few isolated cases, however: measles, 1; scarlet fever, 2. The water supply of Albion is excellent, but the drainage is not what it should be. The same is certain to be improved very soon.

B. E. MILLER,
Health Officer.

OHIO COUNTY.

The health of Ohio County during the year has been fairly good. There have been only a few cases of scarlet and typhoid fever, but no deaths. Ten cases of smallpox were reported, two of them being confluent. There were no deaths from this cause. The county asylum is in fair sanitary condition. The inmates are all in good health. The building, however, is not what it should be. The county jail is not sanitary, but is well kept. The courthouse is a very old building, and is not as clean as it should be. The schoolhouses are not all well kept and very few of them are sanitary, but improvement and advancement are apparent in this respect.

G. A. STEVENSON,
Health Officer.

ORANGE COUNTY.

No epidemic of any kind has visited Orange County during the year. There have been a few cases of typhoid fever, but a less number than usual. Not a case of diphtheria was reported and I know of no physician that had a case. Scarlet fever has existed in very light form at one or two points. Only one case of smallpox was reported from Orleans. There was no spread of the disease. Many of the schoolhouses in the county are new and all such are in good sanitary condition. The remainder are well kept, but are not sanitary, because they are not properly warmed, lighted and ventilated. The courthouse is in good condition and is well kept. The county jail has been repaired since my last report and is now fairly sanitary. It is lighted by electric lights and supplied with satisfactory closets. Our new county asylum is almost finished. It is a good structure and is supplied with all modern sanitary requirements. Health Officers of the towns of Orleans and Paoli report the sanitary condition

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of their respective corporations as fair. The towns of French Lick and West Baden have recently been incorporated. They are not, as yet, in first-class sanitary condition. The new method of collecting death reports is a great improvement over the old way.

C. L. BOYD,
Health Officer.

OWEN COUNTY.

The Owen County poorhouse is a brick structure, two stories high, and has 30 rooms. There is a basement under about one-half of the building, basement and building being well ventilated. The facilities for bathing are a makeshift, and the heating is by stoves. There is an average of 20 inmates in the infirmary all the time. There are two incurable insane. The building is well kept and clean. Iron bedsteads are used, but a system of water supply, bathrooms and furnace heat are needed. The jail is attached to the sheriff's residence. Both buildings are 50 years old and have no sanitary conveniences. The jail is unhealthy, being badly ventilated, poorly lighted and the sewerage dangerous. It is as well kept as the conditions will permit. There are 88 country schoolhouses—87 frame and one brick—in the county. The brick schoolhouse is three years old and is sanitary in every particular. The frame buildings, as a rule, are old, with three windows on a side and stoves in the center, and a few only have cloakrooms. All new schoolhouses which are built are according to the plans and specifications furnished from the State Board of Health. Many of the schools are overcrowded and this is a very bad unsanitary feature. The water supply is generally good. I know of no instances where it is bad. Outhouses at one-room houses are generally very imperfect and unsatisfactory. White River, which enters Owen County near Gosport and traverses the greater portion of the county, is badly polluted. It receives its pollution from the city of Indianapolis and this, undoubtedly, has an effect upon the health of the people along the stream. It is a cesspool during the summer and in low stages of water. Within the past two years Owen County has built 130 miles of pike roads at a cost of about $200,000. I think this a sanitary feature of no small moment. Transmissible diseases have not prevailed in epidemic form, except smallpox. There was an outbreak of this disease at Patricksburg and neighborhood which was very hard to control. There was also an epidemic at Freedom, 8 cases in all appearing there. Physicians of Freedom failed to recognize the disease, even when the cases were in pustular stage and well marked. None of the victims of smallpox had ever been vaccinated. Dr. W. A. Hodges, of Freedom, who had been exposed, left the town with his family at the time he was breaking out with the disease. He returned to Freedom on a passenger train which was well filled with people, still covered with pustules. A brakeman on that train developed smallpox in about two weeks thereafter. The County Board of Health furnished free vaccination and employed a physician to vaccinate. A large number availed themselves of this protection. Scarlet fever in mild form has prevailed to some degree. On account of mildness the disease disarmed all fear and there was little successful effort put forth to prevent spread. At Gosport, scarlet fever got quite a start. The

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situation became alarming, and instead of fighting the disease in a rational way in its incipiency, schools were closed and the disease allowed to run riot. Every effort was made to enlist the citizens, health authorities and all the physicians in a warfare against the contagion. One doctor who is practicing medicine, by the grace of a ten years' license, was particularly hostile against all efforts to control, and in a public meeting denounced the County Secretary as a crank and a meddler. With some of the physicians fighting all attempts to suppress the disease, no wonder it spread to different parts of the county. It can not be told how many children are maimed and crippled for life. Of the 49 cases reported in three months, 46 occurred in Gosport. There have been 44 deaths from tuberculosis during the year. A State Sanatorium should be constructed for the purpose of fighting this disease, and the people should be thoroughly instructed in regard to its many dangers. Forty-five cases of typhoid fever were reported, with 7 deaths. In instances it is hard to make people believe how it is they acquire typhoid fever. There were 14 deaths from diarrhoeal diseases among infants. Circulars concerning diarrhoeal diseases have been mailed freely over the county. Measles and whooping-cough have prevailed about as usual with only one fatal case from measles.

The County Board of Health has been alive to the health interests of the county and has given full support to the Health Officer. I have written and answered over 500 letters connected with the business of the office during the year and made numerous visits to various parts of the county. Health pamphlets have been generously distributed and monthly reports of mortality and quarterly reports of other vital statistics promptly made. I have attended the annual meetings of the State Health Officers and have read three papers.

N. D. COX,
Health Officer.

PARKE COUNTY.

The health of this county has been fairly good during the year. No epidemics have been reported, but there have been slight outbreaks of diphtheria and scarlet fever. Measles has prevailed quite extensively. Smallpox appeared at two places during the year, but it was in mild form, and some cases, undoubtedly, occurred which were not reported. There were no deaths from this cause. There were 14 typhoid deaths, which indicates that there must have been about 140 cases of the disease and it further indicates that the water supply of the county is not what it should be. Recommendations have gone forth repeatedly to the people in regard to their drinking water and it is to be hoped that good results will follow in time. The tuberculosis deaths numbered 41. The schoolhouses of the county are by no means what they should be. Most of them are old structures ventilated by windows and doors and heated by stoves. Such schoolhouses can not be sanitary. The new schoolhouses all conform to the requirements of sanitary science. The courthouse is an old building and is not well kept. There are no extra provisions for ventilation, and the drainage is far from what it should be. The jail is not sanitary, for its con-

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struction prevents proper sanitation. The drainage is very bad and the ventilation is not adequate. The general health of the county could have been better.

W. H. GILLUM,
Health Officer.

PERRY COUNTY.

There were 255 deaths, 335 births, 243 marriages and 141 cases of contagious diseases reported in Perry County in 1901. Reports are much better than last year. Smallpox broke out in the county in March. There were 37 cases, but it was stamped out with no deaths. Tell City physicians had cases of diphtheria, scarlet fever and smallpox all at the same time. General vaccination has been ordered and all cases of smallpox are promptly quarantined. Our schoolhouse is new, is built of stone and sanitary requirements are fairly met. Bathrooms are badly needed by the county poor asylum, otherwise sanitary conditions are pretty satisfactory there. There are three incorpoated towns in this county: Cannelton, Tell City and Troy. There were no contagious diseases reported from Troy. On account of smallpox at Tell City several metings were held by the Troy Board of Health. At the first of these meetings, general vaccination was ordered and the town authorities agreed to furnish the virus free to physicians, who in turn were to collect 25 cents from each person vaccinated if financially able to pay. Otherwise the work was to be done at the expense of the town. Despite this order and the provisions made, very few vaccinations were affected. The streets and alleys of Troy are fairly clean, but a few complaints were received, during the hot months, of pig pens and outhouses. These complaints were promptly attended to. The schoolhouse at Cannelton is heated by steam and the ventilation is by windows and doors. It is well kept, but is not what it should be from a sanitary standpoint.

There are 102 schoolhouses in the county. Ninety-two of these are unsanitary. Few of the schoolhouses are painted and many have shed their past coat of plaster and some are unfit for human habitation. The poorhouse contains 33 rooms, 26 of which are used for inmates. Of these 8 are occupied at present. The grounds are well drained, building heated by coal stoves and ventilated by windows and doors. There is great need of bathing facilities.

C. T. HENDERSHOT,
Health Officer.

PIKE COUNTY.

Pike County can not be said to be in good sanitary condition. The lowlands are being ditched and tiled, but it will be some time before this work is finished. There were 31 cases of smallpox during the year, but no deaths. There were reported 66 cases of typhoid fever, 14 cases of diphtheria, 9 cases of measles and 3 cases of scarlet fever. Only two of the individuals who had smallpox had ever been vaccinated. In both these instances, the vaccination was in youth, some 30 or 40 years ago. Many citizens refused to be vaccinated, claiming that they prefer to have smallpox. The poor asylum is in fairly good sanitary condition. Many improvements are needed, however, but the place is well kept. The

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Orphans' Home is under excellent management and well kept. The courthouse and county jail are not kept clean and are not sanitary buildings. The town of Petersburg is in poor sanitary condition and always will be until a system of sewerage is put in. The public school buildings are in a very unsanitary condition. The greatest difficulty is that there is not room enough to properly accommodate the pupils. The lighting is bad. There is not a room in the building that has the required window space. The buildings are at present being plumbed and waterclosets placed in the basement. We hope for better things from a sanitary standpoint in Pike County.

T. W. BASINGER,
Health Officer.

PORTER COUNTY.

There were no true epidemics of infectious diseases in Porter County in 1901. There were 21 cases of smallpox reported, all discreet and no fatalities. Sixteen cases of diphtheria were reported, with 5 deaths, which is certainly a very high rate of mortality. There were 7 cases of typhoid fever and 2 deaths.

There are 102 schoolhouses in the county and a minority are strictly sanitary. Some of them, however, are passable in this respect and others should be condemned. The water supply is most invariably from driven wells. One schoolhouse in the northern part of Center Township was, from its photographs, plans and descriptions, awarded the prize at the Paris Exposition as the best schoolhouse in the world. The county poorhouse is dilapidated, unsanitary, wretched and in every way a disgrace to the county.

A. P. LETHERMAN,
Health Officer.

POSEY COUNTY.

The soil of Posey County is generally underlaid with gravel and the drainage is therefore good. A great deal of tiling is being done annually and this improves sanitary conditions very perceptibly. We have had one epidemic during the year. There have been several cases of typhoid fever, but no fatalities. Our jail is badly constructed, the ventilation is not sufficient. It is kept in passable condition. We are proud of our infirmary. The house is new, is well kept, the inmates are well fed, and, altogether, the place is very satisfactory. The schoolhouses are generally in passable condition, but sanitary criticism may apply to every schoolhouse in the county. We hope for better things in this respect for the future. As a poor physician, I have found, in many instances, deplorable conditions, not only poverty, but filthy surroundings. A filter plant is being put in the waterworks of the city of Mt. Vernon. We expect hereafter to have an ample water supply.

R. L. HARDWICK,
Health Officer.

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PULASKI COUNTY.

From personal observation and best information at hand, I find the county schools to be in passably good sanitary condition, with few exceptions. There have been no complaints in regard to schools. The public school building at Winamac is sanitary in every respect. It is new and is well kept. There are 101 school buildings in the county. The county asylum is a brick building, contains 40 rooms and has 21 inmates. The hot water system is used for heating and is in good working order. There are bathrooms and closets; all are well kept and in good order. The sewerage is first-class. There were 7 deaths during the year; all were old people. This county has no jail and but little use for one. There has been no epidemic during the year. A few cases of diphtheria have been reported at or near Monterey. They were promptly quarantined and spread was prevented. There were 144 patients in the county during the year.

J. J. THOMAS,
Health Officer.

PUTNAM COUNTY.

This county has been free from epidemics during the last year. Smallpox developed five different times and each time through a different source of infection. Prompt quarantine and general vaccination has prevented the spread of the disease. One case was diagnosed nettle rash by the attending physician. There were 40 exposures, but every exposed person was vaccinated and not one developed the disease, except the immediate members of the family, who were in the beginning in close contact with it. Ignorant physicians still call it Cuban itch, nevertheless, and when one was reported, prompt quarantine was instituted and the smallpox flag put up. There was an epidemic of scarlet fever in the school at Raccoon. The first cases were diagnosed nettle rash and there were 35 in all, with 2 deaths. The school was closed, and the building thoroughly disinfected. After this the epidemic subsided. There were only a very few cases of typhoid reported during the year, with 9 deaths. The courthouse is an old dilapidated affair and unsanitary. A new one will very soon be built. The jail is not sanitary, but it will be renovated very soon. The poorhouse is well kept, but is not a sanitary building. General health of the county is good.

G. W. BENCE,
Health Officer.

RANDOLPH COUNTY.

Our schoolhouses are in far better condition than in any previous year. The sanitary survey which I made last year of every schoolhouse in the county has awakened an interest in sanitation. Township trustees are this winter discussing the proper sanitation of schoolhouses. This certainly indicates advancement. Our local Health Officers are doing far better work than heretofore. They are becoming more interested and have a fuller information in regard to sanitation. The county infirmary is well sewered and is well kept. It is passably sanitary. The ventila-

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tion is very good, for the building is supplied with ventilating shafts and all of them work well. There has been no sickness in the jail. We had only 2 persons in 1901. The jail is heated by hot water and it is kept in good sanitary condition and is lighted by electricity. The courthouse is a new building, well ventilated by ducts in the walls, and is heated by steam. The Orphans' Home was built and endowed by a wealthy person of our town, Mr. James Moorman. It is a sanitary building and is well managed. There were 964 cases of measles reported, with 11 deaths; scarlet fever, 9 cases, no deaths; tuberculosis, 28 deaths; typhoid fever, 6 deaths. There were 4 cases of smallpox reported during the year.

Dr. Commons, the efficient Health Officer at Union City, reports as follows: There have been no epidemics in Union City during the year. There have been, however, a very few cases of scarlet fever and diphtheria at different times. There were 3 cases of smallpox, all in the same house. Our schoolhouse is modern and is well kept. The ventilation and lighting are satisfactory.

The Health Officer of Ridgeville reports fairly good sanitary conditions. During the year the dug well in the basement of the school building was condemned and a drilled well built outside of the building. Measles was the only epidemic disease we had. Three cases of typhoid fever, 1 of scarlet fever and 2 of smallpox, but no deaths.

Farmland is in the best sanitary condition it has ever been. There is much room for improvement, and that is occurring rapidly.

Parker.—The schoolhouse is in fair condition, but needs some improvements. The drainage of the town is good. Two large tile sewers run through the corporation. The water supply is largely from driven wells. Dug wells are discouraged. Excepting measles, there were no contagious diseases during the year. We hope to remove the pig pens from the town ere long. Streets and alleys are kept fairly clean. The population is 1,200, and the total deaths were 12, making a very low rate.

Losantville.—There are no ponds or stagnant water within the limits of the town. The town has no special sewerage. There is no schoolhouse within the corporate limits of the town. Drilled wells are largely taking the place of the old-fashioned dug well, this being much to the health of the town.

Lynn.—The water supply is from deep driven wells, and the town is in good sanitary condition. The alleys are clean and pig pens are not allowed. Not a case of typhoid fever was reported during the year. There were a few cases of measles and a few cases of chickenpox. A new school building is being constructed and it will conform with every sanitary condition.

R. BOSWORTH,
Health Officer.

RIPLEY COUNTY.

I herewith submit my report of the sanitary condition of Ripley County for the year 1901. The county buildings, including infirmary, are in passable sanitary condition. There has been no sickness among the prisoners in jail and but little in the infirmary. There has been no smallpox in the county this year. A few cases of measles, a few cases of scarlatina and a very few cases of very mild diphtheria. Typhoid has been less this year than usual, notwithstanding the dry weather and low water.

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Versailles has put in an electric light plant, has improved the streets and planted many shade trees. A new school building is badly needed. Milan has made much needed improvements and so also has Batesville.

Osgood sadly needs to improve its streets and put in sewers. The town should be lighted. This will probably be done this coming year.

R. T. OLMSTED,
Health Officer.

RUSH COUNTY.

The sanitary history of Rush County for 1901 may be classed as fairly good. There were 194 cases of contagious and infectious diseases reported. This is an increase over the preceding year of 47 cases. Measles we have always with us. There were 29 cases of typhoid fever, which is an improvement over 1900, when 65 cases were reported. The sanitary condition of the county poor farm is passable. The building is not what it should be, but is well kept and the inmates have good health. There were no contagious or infectious diseases at the poor farm in 1901. The jail is not a sanitary structure, but is well kept. The ventilation and sewerage is not what it should be. The public school buildings are, many of them, unsanitary and it is only rarely that one is found which is not well kept. All the country schools are supplied with water from deep driven wells. There was no smallpox in Rush County in 1901.

LOT GREEN,
Health Officer.

SCOTT COUNTY.

There were no epidemics of infectious diseases during the year. There were, however, a few isolated cases. No complaints of nuisances, dangerous to the public health, have been received. Twenty-two cases of typhoid were reported, with 1 death; three cases of diphtheria, with no deaths; 21 cases of scarlet fever, with 3 deaths. Total number of deaths during the year was 120. The total births were 167. There were 8 cases of smallpox, with no deaths.

The county poor asylum is in passable sanitary condition. The courthouse and jail are old, but are well kept. Neither are built with any of the modern sanitary conveniences. The schoolhouses built during the year conform to sanitary laws, but the old buildings are all of them unsanitary.

WM. McCLAIN,
Health Officer.

SHELBY COUNTY.

The sanitary condition of Shelby County is passably good. The country is well drained by streams, open ditches and tiled drains. Smallpox invaded the county during the year. There were many cases of the disease, but so many were of mild form that they never were reported. There were no deaths. Diphtheria and scarlet fever appeared once during the year in epidemic form. The number of deaths from diphtheria was 5, and none from scarlet fever. From all causes, the number of deaths was 1,380. The Orphans' Home is a three story brick building, located on high

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land, is heated by a furnace and supplied with good drainage. It is well kept. The county poorhouse was remodeled two years ago, and is partly heated by a furnace and partly by stoves. It is well kept. The county jail is in passable sanitary condition, but needs some repairs. The public school buildings are mostly brick and are well kept. Ventilation is rarely what it should be and outhouses are not always what they should be.

J. B. STEWART,
Health Officer.

SPENCER COUNTY.

There was a slight epidemic of scarlet fever and a few isolated cases of diphtheria during the year in Spencer county. Smallpox prevailed in mild form in the fall. The actual number of cases can not be given, but I estimate they had not less than 200. Tuberculosis is always in evidence. The county jail is passably sanitary. It is well sewered and pasasbly well kept. The courthouse is a brick structure, lighted by electricity, heated by stoves and supplied with water from the public water works. It is not kept clean nor is it in as good state of repair as it should be. The Orphan's Home has been rebuilt. It is very comfortable and is well kept. It has thirty-five inmates. The sleeping rooms and dining-room are hardly suitable for such an institution. The house needs water-works, bathrooms, sick room, better bedrooms and proper ventilation. The matron is a conscientious and competent woman who keeps the house clean and tidy. The county poor asylum is in poor condition. All the buildings are old, dilapidated and dirty. Wall paper and plastering are off in many places. Some rooms are fairly clean. The Superintendent is doing as well as possible under the circumstances. The beds are of straw and the sexes are separated at night, but not in the daytime. The building is lighted by oil, is heated by grates and ventilated by doors, windows and cracks. The physicians are generally reporting their contagious diseases and birth as is required by law.

J. H. JOHNSON,
Health Officer.

STARKE COUNTY.

There were only 4 cases of typhoid fever reported during the year, and no cases of smallpox. Dysentery has not been heard of. In the last half of the year we had 2 outbreaks of diphtheria. There were 4 deaths. Antitoxin was used in every case. The courthouse of this county is new, is of stone and is sanitary in every particular. The poorhouse is an old and dilapidated affair, and a new one is needed. It is impossible to secure sanitary conditions in such a building as we have at present. The public schoolhouses are generally in passable sanitary condition. There are a few, however, which should be condemned. As in many instances new buildings will shortly be constructed, steps will be taken to make certain that every sanitary condition will be observed. The drainage of Starke County has been extended materially in the last year, with an improvement so far as malaria is concerned.

M. R. WRIGHT,
Health Officer.

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STEUBEN COUNTY.

I have visited or had a report from every Health Officer in the county during the year. Satisfactory improvement in the sanitary conditions of the county is to be noted. The Health Officers of the county have been active in instructing the people in a better understanding of sanitation and of the statutes and the rules of the State Board of Health. Regular inspection has been made during almost every month of the year. In this inspection close attention has been given to the public and district school buildings, and decided improvement has been secured. Most of the trustees and all of the teachers are eager to help in all sanitary work. The county infirmary, jail and courthouse are in really excellent sanitary conditions. All are clean and well kept; heating, lighting, drainage and ventilation, good. There were a few cases of diarrhoea and lagrippe among the inmates of the poorhouse during the year. There were only three deaths in this institution, one person 83, one 87 and one 68 years of age. Complications following lagrippe caused the deaths. Scarlet fever in very mild form, 10 cases in all, was reported from one part of the county, but no deaths occurred. Measles have prevailed in all parts of the county. Five cases of typhoid fever were reported, but these were scattered and were not localized so as to suggest any common source of infection. Three cases of cerebro-spinal meningitis, resulting in death of the 3, occurred. The cases were all in one family. Smallpox appeared in January in the southwest part of the county. The disease was promptly discovered and isolation and vaccination of all the exposed was enforced. The cases were among the unvaccinated exclusively. No fatalities occurred. Disinfection with formaldehyde, isolation and vaccination have been efficient in restricting the spread of the disease. Smallpox has prevailed extensively in Williams County, Ohio, which bounds Steuben County on the east. The County Board of Health has given the fullest support to the Health Officer and advanced sanitation in Steuben County under such conditions is only a question of time.

The total number of deaths during the year, was 163. The oldest decedent was 94 years. Total number of births, 146—60 females and 86 males. The number of marriages were 161. A number of complaints of nuisances have been received. All have been inspected and looked after according to my best judgment.

W. H. LANE,
Health Officer.

ST. JOSEPH COUNTY.

During the year 1901 St. Joseph County was exceptionally free from all epidemics; although from time to time throughout the county there were sporadic cases of smallpox, scarlet fever and diphtheria; but at no time during the history of the year did any of these diseases approach anything like an epidemic.

The mortality for the year, throughout the county, was a trifle over 13 per cent. from all causes. I visited most of the schools in the county during the year, and in some found defects, which, by calling the attention of the trustees to same, were corrected. In one instance it was necessary to condemn a schoolhouse. Most of the newer buildings that

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have been built during the past two years are in very good shape as to the direction of light, ventilation and heating for the comfort and health of the pupils.

The county jail is a comparatively new structure, it is well ventilated and the plumbing is first-class. The health of the inmates has been very good.

Within St. Joseph County we have one public institution, the Orphans' Home, which is situated upon the banks of the river in a very salubrious neighborhood. They have had 100 children. During the year they had an epidemic of diphtheria, with 30 cases and only 1 death.

The County Asylum: The buildings are old and are not built upon modern plans. The ventilation is defective, there is no system of sewerage worth the name, the buildings are crowded and are not adapted for public purposes. The County Commissioners have had plans drawn for new and commodious buildings to be built with modern ideas, but owing to lack of funds, contract has not been let for the new buildings, which probably will be begun and completed in the near future.

Owing to the geological formation in the county our water is free from surface contamination and typhoid fever has been very rare.

The police station, where tramps and prisoners from the city were huddled indiscriminately, was certainly a "black hole of Calcutta;" fortunately this has been remedied by the city building, a new and commodious city hall, and with it a new police station, where the prisoners can be separated, the sanitary condition has been improved, and fear of contagion from that source has been lessened.

J. W. HILL,
Health Officer.

SULLIVAN COUNTY.

Sullivan County has a large population of miners and very few of them live in a sanitary way. Nevertheless the sick rate seems not to be any higher among them than where people live closer to the laws of hygiene. There were 9 deaths from typhoid fever during the year and probably 100 cases. It is evident an improvement could be made in this direction. The tuberculosis deaths number 62. The diphtheria deaths number 8 and there were 2 epidemics during the year. There were no deaths from scarlet fever and none from smallpox, although the latter disease prevailed to some degree. All of the cases were in mild form. There were 13 deaths from measles, which tells of a fierce epidemic which actually existed. The Sullivan County courthouse and jail are not what they should be from a sanitary standpoint. I have recommended improvements every year, but no action has been taken to date. The schoolhouses are most of them ventilated simply by windows and doors and heated by stoves. They, of course, are not sanitary. The water supply of the schools is not what it should be in many instances. This fact has been called to the attention of school authorities and recommendations made in other respects. It is hoped that improvements will appear in time. The drainage area is increasing each year and this means that malaria and that order of diseases will decrease.

E. D. THIXTUN,
Health Officer.

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SWITZERLAND COUNTY.

During the winter an epidemic of mild smallpox visited this county. Some difficulty was experienced in awakening the people, as well as some of the physicians, to a full realization of the situation. Owing to education in regard to sanitary matters, the public is becoming more alive to their health interests and are exhibiting a greater willingness to aid Health Officers in their work. The county asylum and jail are well kept, but are old buildings and are not sanitary. The courthouse is also an old building. Progress in sanitation is satisfactory in Switzerland County.

J. W. SMITH,
Health Officer.

TIPPECANOE COUNTY.

Tippecanoe County, being well drained by the Wabash River and its tributaries, enjoys unusually good sanitary conditions in this respect. There are a few ponds and swampy places in the county and these will disappear in all probability within another year, for the people are awakened to the necessity of thorough drainage. A great ditch is being constructed along the southern portion of the county. When this is in operation an improvement in regard to malarial diseases will undoubtedly be noticed. The city of Lafayette has a complete sewer system and is pretty well paved. The city crematory is a valuable adjunct in maintaining the public health. The system of garbage collection and disposal in this city is very successful and satisfactory. The majority of our school buildings are modern, but there are many which should be condemned. They are usually well kept. The county asylum is well kept, but the building itself is not sanitary as it should be. Improvements will unquestionably soon be ordered. The courthouse is a new one and ample in every respect. The jail is satisfactory from a sanitary standpoint. There has been no epidemic during the year. Diphtheria has prevailed to a little extent, but nowhere has it assumed epidemic proportions. Smallpox in mild form infected the county in March, but there has been no fatality so far and the people and officials are alive to the necessity of suppressing it. Only a very few cases of typhoid fever have been reported.

J. V. LITTELL,
Health Officer.

TIPTON COUNTY.

No serious epidemics occurred in Tipton County in 1901. Tuberculosis and typhoid fever prevailed about as usual and there seems to have been less of diphtheria and scarlet fever than is usual. There were two cases of smallpox in Tipton County during the year.

Our schoolhouses are not in a single instance up to a high sanitary standing. Seven schoolhouses are in good condition, 12 are bad and the remainder fair. Each new building constructed meets all modern sanitary requirements. The condition of the county infirmary is not improved over the year preceding and the same may be said of the jail, although neither institution suffers very bad sanitation.

A. S. DICKEY,
Health Officer.

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UNION COUNTY.

A sanitary survey of this county discovers sanitary conditions to be above fair. The citizens are certainly taking on advanced ideas in regard to sanitation. There were no epidemics in 1901, and the general sickness was very little. The physicians here are a little slow in making their reports of contagious diseases, but they have been given to understand that reports must come in promptly. There are 38 schoolhouses in our county, 8 of them are heated by furnaces, 2 by steam, and rest by stoves. The ventilation is by windows and doors. The new school buildings which are being constructed have all the late improvements and are up-to-date. Only driven wells are used for water supply at schools. Gradually the dug wells at private residences are being abolished and drilled wells substituted. The county infirmary, built in 1899, is of brick, 2 stories, 42 rooms, is heated by steam and the sewerage is satisfactory. At the present time there are 13 inmates. There were 2 deaths during the year, both from old age. The health of the inmates is very good. No consumptives are on the list. The county jail, built in 1884, is passably sanitary, is well kept and the sewerage is satisfactory. There has been no occupant for 18 months.

S. D KELL,
Health Officer.

VANDERBURGH COUNTY.

The courthouse and jail of Vanderburgh County are new and sanitary and well kept. The infirmary and Orphans' Asylum are only in fairly good sanitary condition. The plumbing at the county asylum will be torn out in a few months and new supplied. Our city schools are in fairly good sanitary conditions. One hundred and three rooms are most satisfactory, but 102 rooms are yet to be much improved. The fan system of heating and ventilating is used for 80 rooms in all. The rural school buildings are only is passable condition. Twenty per cent. are of brick and are heated by furnaces, and the remainder are frame structures and heated by coal and wood stoves. Not a few of the rural school buildings should be condemned. The Southern Indiana Hospital for the Insane, situated in this county, is in fairly good sanitary condition. The building itself is open to severe criticism in many respects. The plumbing and sewers are in good order, there has been very little sickness in the past year and none of the contagious and infectious character excepting tuberculosis.

W. S. PRITCHETT,
Health Officer.

VERMILLION COUNTY.

The basis of this annual report is my quarterly reports to the County Commissioners, commencing January 2, 1901. Diphtheria and scarlet fever have prevailed to some degree during the year. Prompt notification has been required of the physicians and sanitary measures promptly commenced to prevent spread of the infection. The deaths have been fewer than usual and the severity of the cases has been less than usual. There has been one illegal burial, with disinterment and inquest, as the law

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commands. There have been several cases of smallpox, exactly how many can not be positively stated, because all have not been reported. This was because the diagnosis has been different in many instances and also because people have had the disease and never employed physicians. There was 1 death. The dead man's name was John White, was 40 years old and lived near Summit Grove. Cancer seems to exist to a greater degree than formerly, but exact records of cases can not be given. I have been called upon during the year, personally, to attend to 11 cases, and I have record of 9 others. On July 10, smallpox was discovered on an island in the Wabash River, about one mile east and one mile south of Hillsdale. The population of the island consisted of 3 women and 3 men, living together in a town. Quarantine was promptly established, but men who had been exposed to the contagion were promptly arrested, sent to the island and kept there under guard for 14 days. Four more cases developed, one of them was of confluent form. Two men had been successfully vaccinated a few years before and escaped the disease. The island is claimed by no county, but the Attorney-General rendered the opinion that Vermillion was legally responsible for the expense and the same was therefore promptly obeyed. There was very little dysentery during the summer. A few cases appeared in August, but no deaths were reported. Several nuisances were abated during the year, notably a slaughterhouse at Cayuga. On November 25 I inspected the sanitary conditions of the poorhouse, jail and courthouse. The superintendents of these buildings took pride in keeping them in first-class condition, but I found the closets of the courthouse untidy. This defect was immediately remedied upon notice being called to the same. The reports from the incorporated towns of the county are all favorable. No epidemics, and the general health good, with many sanitary improvements made and in process.

E. C. LOOMIS,
Health Officer.

VIGO COUNTY

I can report the general sanitary condition of Vigo County as only fair to good. There is improvement of surface drainage by open and sewer ditches. There is also improvement of public highways. The general sanitary conditions of school buildings throughout the county shows an encouraging degree of improvement. The new buildings constructed are carefully looked after as far as sanitary conditions are concerned. Driven and bored wells only are allowed at schoolhouses from which to furnish water supplies. Many teachers have been induced to study hygiene and at times present points in regard to the subject to their pupils. The county jail is in bad sanitary condition, but is now undergoing repairs and additions which will correct most of the faults. The county infirmary and Orphans' Asylum are in excellent condition. The management of these institutions is first-class. It is possible, of course, to make improvements in places. The disposal of garbage has enlisted the careful attention of the Health Board of Terre Haute. A good system exists, for, in the last six months, 25,000 barrels of garbage, besides 189 dead animals, have been cremated. During the year we have had the usual infectious diseases among the children. Scarlet fever, diphtheria, measles

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and whooping-cough have prevailed to some degree. Smallpox has also existed, the first cases appearing in February. There were 27 well-marked cases during the year, but no deaths. Quarantine, disinfection and vaccination seem to have prevented spread of the infection. The mildness of the contagion makes it difficult to enforce strict quarantine measures. Health Officers have been threatened with personal violence on account of their solicitation and work in the public health cause. In instances, vaccination is absolutely refused.

It is gratifying to secure such complete death returns as the new law enables us to do. I feel confident there has not been a single death which has escaped being reported since the law went into effect in this county. Birth reports are not yet as correct as they should be, but I feel we are doing very well. During the year there were 952 births, 51 cases of diphtheria, 235 cases of scarlet fever, 29 cases of smallpox, 18 cases of typhoid fever, 1 case of dysentery, and one of cerebro-spinal fever. There were 679 marriages. Ministers do not report marriages as promptly as they should.

J. M. TALBOTT,
Health Officer.

WABASH COUNTY.

No epidemics reported during the year. There have been a few cases of diphtheria, scarlet fever and smallpox, but no epidemics, as said above. To this date there have been 19 cases of smallpox reported, with no deaths. The cases have been promptly quarantined and all sanitary measures energetically enforced. The sanitary conditions of our public buildings are satisfactory. They are all modern buildings, and sanitation has been observed in the construction of every one of them.

J. B. WILLIAMS,
Health Officer.

WARREN COUNTY.

Through a review of the records I find that the general health of Warren County was very good during the year of 1901. The average death rate was below the average for the whole State. There were 2 cases of smallpox during the year, and no deaths. Diphtheria and scarlet fever seem to have diminished in the county, for they are rarely heard of. The only public institution in the county, besides the jail, is the county asylum, and I find it in very good sanitary condition.

S. S. DE LANCEY,
Health Officer.

WARRICK COUNTY.

The natural drainage of Warrick County is very good. There is much artificial drainage and its construction has been attended with the improvement of the public health. Boonville, the county seat, located near the center of the county, is a town of 1,881 inhabitants. It is well drained, has macadamized streets, electric lights, a central heating plant and a good system of waterworks. A high school building was erected last summer. It is modern in every respect, all sanitary requirements being

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met. A few of the district schoolhouses are not what they should be from a sanitary point of view. Recommendations have been made in every instance where the same were needed. The courthouse is old, unsanitary and uncleanly. The county jail is in a passable sanitary condition, but repairs and improvements are needed. There were no deaths nor sickness in the institution during the year. The poorhouse is a new structure, frame, and is well kept. It does not contain all the sanitary features it should, yet it is heated by furnaces and is supplied with hot and cold water and baths and toiletrooms. The ventilation should have been better. There were 11 males and 5 females as inmates during the year. There were 4 deaths—2 males and 2 females. The Orphans' Home is an excellent building and well kept. There were only a few recommendations to be made and they were promptly complied with. Health in the institution has been excellent. There was no epidemic or notable illness during the year.

T. WRIGHT,
Health Officer.

WASHINGTON COUNTY.

The death rate of Washington County was 15.3 per 1,000 in 1901. This means there were 308 deaths in all. Fifteen of these were caused by typhoid fever, 14 by tuberculosis, 1 by smallpox, and 3 by measles. There were no diphtheria and scarlet fever deaths reported. These diseases, however, existed to some degree, but generally in mild form. Measles was epidemic in the fall. The schoolhouses of Washington County are not what they should be by considerable. Most of them are poor structures and some of them in a dilapidated condition. The ventilation and warming are generally faulty and the water supply in many instances is bad. Outhouses are not cared for as they should be in too many instances. The schoolhouses pretty generally conform to modern sanitary requirements and are well kept. The courthouse is a new structure of stone and is well kept, but there are no special provisions for ventilation, otherwise the structure may be said to be very sanitary. The town of Salem needs sewers and paving. These two improvements will probably come in time. The general character of the ground is rolling, and this affords good drainage. Malaria is rarely existant in this county. The poorhouse is an old structure, very unsanitary, but as well kept as possible under the circumstances.

W. J. PURKHISER,
Health Officer.

WAYNE COUNTY.

There are 87 school buildings in the county, 224 teachers and 5,910 pupils enrolled. There is an average of 30 pupils to each schoolroom and, with rare exceptions, these rooms have cross-lights. The buildings are mostly heated by wood and coal stoves, except in a few of the larger village schools, where furnaces and ventilating heaters are used. Ventilation is usually by windows and doors, very few buildings being provided with air ducts. With rare exceptions, the schoolhouses are well kept. The floors are scrubbed at the beginning of each term and whenever

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infectious diseases have occurred the schoolrooms have been disinfected with formaldehyde. The water supply is from driven wells, but there are not a few old dug wells to be abolished. The outhouses are rarely in good sanitary condition. The County Board has ordered that all school children shall be excluded from school who are sick in the least degree. A sick child should not attend school. All of the schoolrooms in Richmond are heated either by heaters or by hot air furnaces. None is warmed by stoves. It is hoped forced ventilation by blowers will soon be used in the larger buildings. All are provided with first-class lavatories, some of them having these conveniences on each floor. City water, which is of good quality, is furnished to every building. Because of the epidemic of smallpox that has prevailed in and about Richmond, repeated requests have been sent to all the Health Officers of the county, to stimulate interest in the matter of vaccination. The smallpox which has existed here has been mild, and during the year not a single fatality. Measles has been severely epidemic in every part of the county within the past year and has affected seriously the school attendance. Diphtheria of virulent type appeared among the pupils in the Richmond schools in the spring and several deaths occurred. The scarlet fever cases reported were of mild type.

The poorhouse is a very good building and is passably sanitary. It is well kept. The jail and courthouse are new buildings, sanitary and well kept. The principal sanitary work of Wayne County lies along the schoolhouse lines. The villages of the county, while not sewered, are inhabited by most intelligent people, who believe that cleanliness is next to Godliness.

G. H. GRANT,
Health Officer.

WELLS COUNTY.

In giving a review of the health and sanitary conditions of Wells County, I am at a disadvantage, because I have been Health Officer for only a part of the year of 1902. In addition, I find imperfect records. From personal observation and consultation with other physicians, I feel warranted in saying: There have been no epidemics of infectious and contagious diseases to an extent sufficient to say they were epidemics. Typhoid fever, which usually figures largely in the health returns of this county, does not appear to the same extent in 1901 as in previous years. The first case of smallpox during the present State epidemic, appeared in Wells County in September, and from that time on until the end of the year, there were constantly a few cases. Tuberculosis is the worst disease we have to deal with.

There are in the county, outside the city of Bluffton, 101 school buildings, all of brick, but some of them rather old and very few of them are sanitary. I believe that a good water supply exists at all our schools, because it is recorded that none but driven wells have been put down. The school buildings of Bluffton, upon inspection, are found in passable sanitary condition. The county jail, the county infirmary and County Orphans' Home are not sanitary in every particular but are well kept.

LOUIS SEVERIN,
Health Officer.

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WHITE COUNTY.

I have made a survey of the county and have had reports from all subordinate Health Officers. From the data so secured, I beg leave to submit the following:

There has undoubtedly been a general improvement in the sanitary standing and health of the county in the last year. I find it much easier now to induce the people to clean up and put things in sanitary condition. The courthouse is a new building and is passably sanitary. The jail badly needs a sewer and from the sewage disposal standpoint is to be severely criticised. Both of these public buildings are well kept. There are defects in the drainage of the high school building at Monticello. Attention of the School Board has been called to the matter and will soon be remedied. The Orphans' Home is a 2-story frame building, well located and well kept. There are no children in the home at the present time. The county poorhouse is a 2-story frame, in only fair repair. There are 20 inmates at the present time. There is not sufficient separation of the sexes.

Many of the schoolhouses in the county are not sanitary and many are poorly kept. There are improvements along this line, however. Where new buildings are being erected plans are made to include all sanitary requirements. The town of Walcott has erected a new 2-story brick school building with modern improvements.

A number of nuisances have been abated during the past year, mostly vaults and pig pens. The law was not resorted to in a single instance. The death rate for 1901 was a fraction greater than the previous year, but the population has considerably increased. The total deaths was 202, births 404, marriages 180. There were 43 cases of typhoid fever, 48 of measles, 19 of scarlet fever, 28 of whooping-cough, 7 of diphtheria, and 6 of smallpox reported.

The rules of the State Board of Health concerning infectious diseases have been carefully enforced. There were no deaths from smallpox, all the cases being mild.

M. T. DIDLAKE,
Health Officer.

WHITLEY COUNTY.

The general health of the people of Whitley County was exceptionally good during the year. No epidemics were reported. Only a few cases of diphtheria were known. This is also true of scarlet fever. Quarantine and thorough disinfection seem to have prevented any spread of these diseases. Typhoid fever has been less than ordinary. The abandonment of dug wells and almost universal use of tubular wells is the cause of the lessening in typhoid. There has been no smallpox in the county, which is a remarkable fact when we consider that it has occurred in the adjoining counties. Some of our citizens have been exposed, but by prompt vaccination and thorough disinfection I think we have prevented the disease from appearing. The people generally and the public press are heartily in sympathy with public health work. The rules of the State Board of Health have been promulgated and are generally obeyed. It

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is not difficult to secure their enforcement. No improvement is to be reported in regard to the sanitary conditions of the poor asylum, jail and courthouse. These buildings are not what they should be in a sanitary way. The city and country school buildings were all thoroughly cleaned and many of them disinfected and repainted before school opened for the year. Every school house in the county is furnished with water from driven wells.

O. V. SCHUMAN,
Health Officer.

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PROCEEDINGS

OF

ELEVENTH ANNUAL CONFERENCE

OF

INDIANA HEALTH OFFICERS.

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PROCEEDINGS ELEVENTH ANNUAL CONFERENCE INDIANA HEALTH OFFICERS.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, May 27-28, 1901.

The first session was called to order at 10 a. m., May 27, Dr. John H. Forrest, President of the State Board of Health, presiding.

The following opening address was read:

ADDRESS OF PRESIDENT JOHN H. FORREST.

Gentlemen—Some years ago a movement was originated with the State Board of Health to hold a meeting of the Health Officers of the State each year, the object being that by coming in contact with each other, all would be benefited and the efficiency of the Health Officers all over the State, be improved.

We believe that the result of these meetings has demonstrated that the movement was a wise one, and that there has been a decided improvement as a result of this "coming together" and discussing the methods of dealing with the different conditions which have arisen in widely separated communities in the State.

The State Board takes a great deal of pleasure in saying that at the present time in Indiana, the vital statistics are as nearly correct as in any of the states, and in some particulars we believe that Indiana leads, for the monthly bulletin is in demand by insurance companies and by the health and statistical departments of all the states and a number of foreign countries. This is a tribute of which we feel justly proud.

One of the greatest disadvantages the State Board now labors under is the lack of a laboratory. Most of you, no doubt, are familiar with the fact that we had a bill before the last Legislature which we hoped to get through, establishing a State

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laboratory, under the supervision of the State Board of Health, where the bacteriological, pathological and diagnostic examinations might be made, and where, also, all sanitary and food analyses might be done for the benefit of the people. This bill failed to pass. Each one of you know how important and necessary it is to have such a laboratory and how gladly you would have taken advantage of having examinations made correctly and expeditiously, if you had had the opportunity, and how such examinations would have settled vexatious questions immediately, that were delayed indefinitely or perhaps were never fully and satisfactorily settled.

The defeat of this laboratory bill has in no wise discouraged the State Board of Health. Looking back at the many obstacles the Board has encountered, we feel that in spite of all, we have accomplished a great deal, and that good progress has been made in establishing in Indiana a system of health work and vital statistics collection that will compare favorably with other states. The State Board believes that, to accomplish still better results, it should have a fully equipped laboratory of hygiene, and we urge each one of you to give your influence and hearty effort in seeing to it that your members of the next Legislature are in favor of a laboratory.

These annual meetings of the Health Officers have, heretofore, been called by the State Board of Health. They have been satisfactorily successful, but I now believe that their usefulness is established and that interest has been created to such an extent that there may be another way by which even more interest and more good may be accomplished, and I, therefore, make this suggestion:

I believe the time has now arrived when you should organize yourselves into a separate body of your own, to be known, say, as the Health Officers' Association of Indiana, to which Health Officers of State, county and city are eligible for membership; that you should elect your president and officers, issue certificates of membership, charging such fees as will cover expenses, and hold your meetings at such times and places as you may decide upon.

I believe by organizing this body you can get up more enthusiasm and procure a membership that will include almost every Health Officer in the State, and do an increased amount of good

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as an independent organization, and when it comes to creating a sentiment for favorable legislation, your power will be much greater than when acting individually.

I can assure you that the State Board of Health will at all times give you such assistance as lies within its power, and I know that your Association will be glad to assist the State Board, for our object will always be one and the same—to promote good morals, health and happiness, and protect the human race from unsanitary conditions, disease and death.

PROGRAM.

First Session—Monday, May 27, 10:00 a. m.
Second Session—Monday, May 27, 2:00 p. m.
Third Session—Monday, May 27, 8:00 p. m.
Fourth Session—Tuesday, May 28, 9:00 a. m.
Fifth Session—Tuesday, May 28, 2:00 p. m.

The third session, Monday evening, 8:00 p. m., will be given up to a discussion of Sewage Disposal and Water Supplies. Chas. Carrol Brown, Engineer and editor of Municipal Engineering, will lead the discussion.

Welcome—Governor W. T. Durbin.

The Aristocracy of Health, by W. J. Fairfield, Anderson.
Discussion.

Mosquitos and Malaria, by Robert Hessler, Logansport.
Discussion.

Recent Experiences with Smallpox, by H. A. Spickerman, Muncie.
Discussion.

The Opposition to Sanitation, by Brose T. Horne, Bluffton.
Discussion.

Rural Quarantine and Disinfection, by G. H. Grant, Richmond.
Discussion.

Need of Dairy and Milk Inspection in Towns and Cities, by A. W. Bitting, Lafayette.
Discussion.

Contagious Disease Outbreaks among School Children; How best to deal with them; the Health Officers and School Officers, by N. D. Cox, Spencer.
Discussion.

The Education and Training of Health Officers, by H. Cowing, Muncie.

SUBJECTS FOR DISCUSSION.

Quarantine—What is it? How should it be conducted?

Nuisance—What is a nuisance? How shall Health Officers go about abolishing nuisances?

To what extent, if any, should the State Board of Health be expected to furnish diagnosis of infectious and contagious diseases?

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How should garbage be disposed of in towns?
What sanitary control should be exercised over measles and whooping-cough?
Criticisms and suggestions concerning the present methods of collecting and recording births, deaths and contagious diseases.
Should the sanitary construction of schoolhouses be regulated by statute?
How about typhoid fever in your jurisdiction?
What experiences have you had in vaccination?
How about tuberculosis in your jurisdiction?
Prevention of cholera infantum.
Drains and sewers and sewage disposal.
Creameries and cheese factories.
Sanitary aspects of cerebro-spinal meningitis.
Farm hygiene.
A laboratory of hygiene for the State.
Medical inspection of schools.
Water supply.
Diphtheria prevention and use of Antitoxin.
Antiseptics in food.
Barber shop sanitation.
How about feeding hogs with slaughterhouse offal?

The President announced the following committees:

On Constitution and By-Laws—Dr. Horne, Dr. Powell and Dr. Charles L. Wright.

On Nominations and Arrangements—Dr. John Ross, Dr. G. W. Shepard, Red Key, and Richard Boswell, Winchester.

THE EDUCATION AND TRAINING OF HEALTH OFFICERS.

DR. H. COWING, MUNCIE.

Mr. President and Gentlemen—I thought at this time that, instead of a set paper, a few commonplace remarks upon the subject of the education and training of Health Officers would be timely. The education and training of the Health Officer, I believe, if we were to elaborate, would cover the entire ground of discussion which is contemplated here in our meeting.

Professor David Starr Jordan said, recently, that the demand of today, the great need of today in professional life, is the educated man and the educated woman. Professor Jordan is an Indiana product, and is a man of whom we are all proud, although he has passed to another part of the country. He is at the head of a great university and is doing a great work. His idea is that the

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demand of the hour is for educated, trained men, college men, in fact. The old idea of college life and college training was to round up men and women, and in a general way make their education elaborate; but today we train men and women in colleges for special lines. That is Dr. Jordan's idea. I have a central thought that I wish to introduce with this introduction.

The Health Officer of today and tomorrow and of the future must be a man who is educated in a special way for this business. I believe he must be a physician. The law says that he shall be a physician. He should be trained in hygiene and sanitation. I do not believe we are doing this work as we should. I believe that the State Board has not, as yet, adequately reminded us of the amount of work that we are to do and the way we are to do it, and the amount of preparation that is necessary. I think the suggestion of the President is very timely and very proper—that we organize ourselves into an association, choose a president and other officers, have meetings and get down to a working basis. We have seen the need through all these years of more accurate and more faithful work in these meetings and in our work throughout the State as Health Boards. The fact is that the average Health Officer is so occupied by his professional duties that he can only occasionally give the Health Office attention, and in many cases he fails signally to do the work as well as it should be done. I believe the State Association of Health Officers should take this work up and in some way solve the problem of a better education for our membership. I have thought that we should meet here, which is the most convenient place, at least once a quarter, and that we should organize as a school wherein we may study all the vital questions of the day that pertain to the health of the State; that we may take them up as pupils do. Both old and young among us should do this, for none of us are too old and none of us are too young to enter this school. Let us have at this school men who are able to teach us. None of us are expert in various lines, and yet we should have expert knowledge in many things that pertain to the sanitation and the health of the State. If it be an analysis of water, it is well worth our while to be able to say to the people in our jurisdiction that this water is good or this water is bad, without having it sent to the State offices. Or if

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information is wanted as to the quality of milk or meat or other food products, we should be able to say in a technical way to our people, "This is good," or "This is bad." The education of the Health Officer should extend into various lines. We all feel the need of a higher education in these duties and in our profession as Health Officers. We have more and more inquiries coming to us every year. The public demands a higher order of education on our part. The average citizen is coming to us constantly with questions that perplex and sometimes annoy us because we are unable to give the right answers to them. There are new questions coming up incident to our conditions of life, which are constantly changing. The effect of the pollution of streams by strawboard and other factories are questions of great moment to us. They mean a great deal to the State; not only to the health of the State, but to the finances of the State. We must meet these questions fairly and intelligently, and solve them as educated men, not arbitrarily, but solve them in a way that will be to the greatest good to the greatest number of citizens.

In our county we now have many of these perplexing questions concerning the pollution of streams. Dr. Hurty has visited our district, and is now with the State Board endeavoring to come to a correct and satisfactory conclusion as to what to do with the refuse of strawboard and other factories that are upon the banks of our streams. The education of the Health Officer should be of a high order, and should be technical. We should begin at the bottom and band oureslves together, form a school and be led by men who are competent to teach us, and then through the interchange of ideas among ourselves, I believe we can accomplish a good deal toward raising the standard of hygienic education in the State of Indiana. As it is, we have gone on from year to year doing the best we could, and occasionally hearing a technical paper without altogether understanding it. We must get down to the rudiments and to the technicalities. Of course, we have to be specialists to a certain extent. No physician will be able to do all of those things, but in a town of any size it can often be divided. The County Health Officer may be a specialist in some line, while the town Health Officer and his assistants may be able to follow other lines.

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As to the training, I repeat again that the Health Officer must be an educated man. No Health Officer today can stand before the people if he be an ignorant man, ignorant of disease or unable to differentiate between the various conditions of disease. We often see this cropping out here and there where Health Officers, by their superior knowledge of disease, are able, by their training, to determine the character of a disease. I think, as a rule, the Health Officers of Indiana have conducted themselves very well in the past two years, especially since the beginning of the peculiar epidemic of smallpox we have had. The mistakes that have been made have been made largely by men who have had no training as Health Officers, and by physicians who had never seen the disease. The Health Officer who stands well in his community, whose relations with the physicians of the community are pleasant, who has a good fellowship with them, has at least one of the qualifications of a trained Health Officer. Unless he has this qualification he will fail, to a certain extent, in accomplishing all that he might as a successful Health Officer.

At this first session of our conference it is well worth our while to consider the matter of the better education and the better training of Health Officers. I acknowledge my ignorance of health matters when I see the wonderful amount of literature on this subject; when I see all of the works that are being sent out by men of culture and education. It makes me feel how very little I do know about the subject of hygiene and sanitation, and how very much I ought to bestir myself and improve myself in order that I may do what little work I attempt to do in a successful manner. I think we can all learn right here in this session to do better work as Health Officers. I am very much interested in this school of sanitation and hygiene of which I have spoken, and would like to have you all give it careful consideration.

Dr. Carl Proegler, Fort Wayne: I have been very much interested in what Dr. Cowing has said. There is certainly but very little more to say, because he has covered the ground so thoroughly. As far as the education and training of a Health Officer is concerned, certainly a man who has scientific training and a man who is a graduate of a good educational institution will, if he has anything in him, keep up with the times and read up on everything pertaining to his profession.

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If I understand the paper right, the doctor wants us to meet every three months for a discussion on these subjects. I have no objection to that, but I do not believe it would be possible for us to meet every three months in Indianapolis. I believe it would be possible for us to meet every six months. Hardly enough of us to form a class could come here every three months.

As for the trained Health Officer, especially if he is in a large city, he should be a trained bacteriologist. I make all the examinations for my own work. I also make examinations of water. I make examinations for physicians who call on me and ask me to differentiate between cases of measles and scarlet fever. Making examinations of water is a field where we are questioned very much. People come to us and ask to have examinations of water made. A man who is versed in chemical analysis and who has a little laboratory can do it. But the bulk of the physicians can not do this. I lately came across a simple water test. It is called the Heltum test, and is imported by Schering & Glatz, 58 Maiden Lane, New York, and is the result of experiments by Hugo Erdman, of Halle, Germany.

I think the Health Officers of large cities ought to be expert bacteriologists, and ought to be able to distinguish any of the diseases that come under their investigation that can be microscopically distinguished. I believe a great many of our Health Officers are very practical men, and I believe the State of Indiana has done a great deal of work in the line of health work. As far as I can learn, I think all physicians and Health Officers have been very alert. I think if we follow Dr. Cowing's advice and have concerted action in perfecting ourselves, we can have far better service. At the same time we must not lose sight of the fact that the pay of many of our Health Officers is inadequate. The county officers must be educated as well as the town officers in what it is necessary for a good Health Officer to know. When the next Legislature meets we ought to see that a better compensation is provided for the Health Officers of the State. You can not expect a man on a small salary to work as well as a man on a large salary. In the city of Fort Wayne the city bacteriologist gets fifteen hundred dollars a year, but he is not allowed to practice.

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Dr. Powell: I should like to heartily endorse the remarks made by Dr. Proegler and also by Dr. Cowing. It is certain that we, all of us, have enough to learn about the things that come under our observation as Health Officers. I think, however, that a meeting every three months could not be attended by the Health Officers who have to pay their own expenses. In many of our counties and cities the authorities are so penurious and so short-sighted that they refuse to pay the expenses of the Health Officers when they attend these meetings and try to get better posted for their work. This means to the Health Officer, not only the actual expense of travel, but the loss of practice while he is gone, for most of us are compelled to depend upon our practice because we do not receive enough compensation from the counties and cities for which we labor. Health Officers, as a whole, deserve better salaries than they receive. On the other hand, the city and county authorities, having given better salaries, should insist upon having first-class service. They would have a right to insist on better service then. The better class of physicians, the educated, intelligent, up-to-date men, can not afford to bother with the health offices for the trivial sum that is paid in many places. In times of stress, when smallpox or some other epidemic breaks out, the town is practically without a Health Officer. Even the best of us have enough to learn about these matters. I know that during the last year many things have come up about which I found I was wholly without information. I have endeavored to inform myself as much as I could, but found many fields of knowledge yet unexplored.

Dr. Hurty: I desire to have something to say on the subject under discussion—the education and training of Health Officers. It is only in recent years that medical colleges have established chairs of hygiene and State medicine. It is only seven years since the Indiana Medical College established such a chair. There is also such a chair at the College of Physicians and Surgeons in this city. You are, of course, aware that we have a school of Sanitary Science at Purdue University, and it is an institution we should be proud of. It is magnificently conducted. Professor Severance Burrage is at the head of this department, and he has labored nobly and well.

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Not long ago the members of the Delaware County Medical Association resolved to give up one of their meetings to the consideration of the subject of State medicine and hygiene, and there were one or two members who said it was ridiculous, that every one knew all about hygiene and sanitation. That was his idea of the situation. So you see there are some doctors that need educating, as well as some people.

The Bulletin for June, 1900, gave you a very short resume of the course which they give at Purdue University. When one has completed that course they will find themselves quite skillful in physiological chemistry and in the analysis of foods. It is quite unlikely that very soon we shall have officers informed in all of this work, giving their whole time to the work, and doing nothing else. But that time will come, and not only must those officers be skilled in this work, but they must be also good diagnosticians of the communicable diseases. They will not be able to concentrate themselves upon treatment, nor do they want to do so. But this is a good way off. Until that time comes we must get along as best we can with the resources at our command. We have commenced the work here in this State, and, in doing that in Indiana, we are ahead in that particular of many other States. In Massachusetts they have a school of hygiene at the Massachusetts School of Technology. There is also a school of hygiene connected with the University of Pennsylvania.

In the reports of the Indiana State Medical Society for 1899 and 1900 you will find a report on State medicine and hygiene, and the reports in both the years named refer to this very subject, and speak of more advanced education for Health Officers. You doubtless have these reports, and you may get good suggestions from them. Dr. Cowing's remarks are right to the point. They are intensely practical, just as Dr. Cowing himself is intensely practical. If these meetings could take the form he has suggested I think they would be very excellent, and it is possible we may do it under the new organization which is proposed and which I hope will be formed.

Dr. Boswell: I went through the University of Michigan and took a course in chemical analysis, but I got a bird's-eye view only of the duties of a Health Officer. But I am willing to go into the

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procession, and if I can not keep up with the band wagon, why, count me out. If I can, I am that much ahead; I have learned that much. This is a grand movement, and I am glad it has some as soon as it has. I did not expect it so soon; in fact, I did not expect it in my day, but I knew it would come some time. I want to give my hearty support to the plan proposed.

On motion Dr. Earp and Dr. Dodds, Indianapolis, were given the courtesy of the floor.

Dr. Earp: I desire to thank you for the courtesy you have extended me. While Dr. Hurty was speaking the thought occurred to me that the teaching of chemistry is slighted by the average medical student. This course was taken up in the early years and abandoned during the later years of the student's college life. Furthermore, if the students acquired enough knowledge to perform a test in urinary analysis, or if they could write out an equasion of some kind—even the very simplest—and perhaps give an analysis of water, it was considered all that was necessary for him to attain.

The time has arrived when the medical student must consider —and I say we are all students—that there are other avenues that are of importance to the practitioner, and this is one of them. This matter is being agitated in all the colleges. The Central College of Physicians and Surgeons has had a chair of this character for fifteen years.

It is a question whether the colleges themselves have originated this idea, or whether it is not members similar to yourselves in different organizations that have prompted this and made it almost compulsory that these medical institutions shall have a chair or department of this kind. There are State Boards that require that a college shall have a chair of this kind, otherwise the college is not recognized by the Board. Therefore, I think Boards of your kind may take credit to yourselves because you have shown the medical colleges that it was necessary for them to have such chairs or departments.

It has been my pleasure in preliminary addresses to take up the subject of saitary science, and oftentimes I have outlined the work that has been suggested by Dr. Hurty, of your Board. The outline that he has given is the best one I have seen; therefore,

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oftentimes in my classes I have taken up the work of Dr. Hurty and made suggestions in regard to some points. I have found this a help to me, and I believe it has been a help to my classes. I believe we should be educated more thoroughly in this line of work. As we become educated more intelligently we can better talk to the people on this matter.

Another point is, do we practice what we teach? For instance: As far as the infection of the various diseases are concerned, do we take the precaution that we require others to take? If we authorize a quarantine in some neighborhood and say that no one must enter or leave unless they make a thorough change of clothing, do we follow out that rule ourselves? If we do not, I believe it destroys confidence in us and the people feel that there is not the amount of sincerity there should be on our part. I asked a Health Officer if he changed clothing after visiting cases of smallpox, or if he had some special form of apparel. He said, "Oh, no, I take a whisk broom and brush off my clothing after I leave the case." That physician was a prominent Health Officer in this State. I have a little satchel which is a great deal of trouble to me, but without which I never visit a case of the kind mentioned. I have in it disinfectants; I have formaline and a spray, and I have what is called a sea-grass linen coat which reaches to my feet. I have a hat that fits closely to my head, and under no case do I go to see a case of smallpox or scarlet fever, or any infectious disease, except I take these precautions. If we do not take these precautions, it seems to me the people will feel that we are not sincere. We can aid ourselves and our colleges and associations by practicing what we teach. I believe that is a matter of education that is of very great importance.

Is it not also true that we have members of our profession who do not send in their reports as often as they should? I refer to reports of infectious diseases. If we expect people to follow out an outline made by us, I believe we ought to show that we ourselves follow it to the letter. If this be done, it is a matter of education.

As far as the education of the student in a sanitary sense is concerned, I believe it is all-important. I believe the teachers in the medical institutions hold an important position, and should not

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only instruct the students in the art and science of this character of work, but endeavor to show the students the importance of this character of work. If we desire to stamp out infectious diseases, as we ought to stamp out many of them, by following out the sanitary rules, as people are now being educated to do, there will come a time when we will not fear the scourges of various infectious diseases which now add so much to the fatalities in our cities.

Dr. Horne: I believe the Health Officers of the State of Indiana come up to the average, and that the faults complained of do not lie so much with the Health Officers as with the people. No matter how well educated a man is, unless he has a good deal of backbone to carry out the measures recommended, he will not be a sucess as a Health Officer. As a rule, the Health Officers of Indiana do their duty; but in most of the cases where they do not do it, it is the fault of the people.

Dr. Dodds, Indianapolis: I am interested in this movement of a better education for Health Officers. I don't believe we should hold that the only Health Officers are the doctors who hold the offices of Health Officers. I think every doctor in Indiana is a Health Officer. If the Health Officer of a town does not have the co-operation of his doctor friends he will have a pretty up-hill business when he tries to control an infectious disease that breaks out in his town. In my immediate neighborhood in this city nearly every other house has been carded for measles in the last few months. Some have had very severe attacks, others not so severe. Some of the cases have not been reported by the doctors. What can the Health Officers do in such a case? I think there ought to be a more stringent law which will compel doctors to report their cases of infectious diseases, and which will hold them responsible for the spread of the diseases. I think that is a question of importance. If you wish a thing impressed upon the minds of the laity, the doctors are the people who must perform that duty, and they must follow out the instructions or rules of the health boards.

I think the education of Health Officers should begin in the common schools. Every man, woman and child ought to be taught how to take care of themselves, and how to prevent the common

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diseases. Of course, this is chopping our heads off, but they should recognize that there is more in the prevention than in the cure. The education of men at the head of institutions and health departments is necessary, and they should have a technical knowledge of the studies and branches which correspond with this, and which are in sympathy with it—chemistry, bacteriology, microscopy and so on. Microscopy is not a fad. I know that my microscope has made me more money than my practice, and I also know that my microscope has made me practice at the same time. It is not a fad with me at all. We should instruct others and teach this in the schools—teach them that the microscope is the best instrument one can have. It is not a question of a fad, or of crankism, or anything of that kind. It is a business proposition; people demand it. I know from experience that this thing is true. The microscope is not an expensive thing, and it is more valuable than anything else a man can have in his office. It is not necessary to have a large instrument for show. Indeed, it is not necessary to have a very great number of surgical instruments, because the best work is done with few tools.

I hope the education of the people will be accomplished through the doctors. Every doctor should feel it his duty and privilege to instruct the people in the method of sanitary prevention and the value and benefit which it brings to a community.

Adjournment.

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SECOND SESSION.

The second session was called to order at 2 p. m., May 27, by Dr. Forrest.

The first paper read at this session was: "Contagious Disease Outbreaks Among School Children; How Best to Deal With Them; the Health Officers and School Officers."

CONTAGION AMONG SCHOOL CHILDREN.

N. D. COX, M. D.

The genial Autocrat of the Breakfast Table has remarked, in substance, that all diseases are curable, if only the physician be called in time; but he adds that, in many cases, to be in time, the visit should have been paid to the great-grandparents of the patient. The Autocrat's thought is so related to my topic that I may be pardoned for referring to it. When we Health Officers visit the schoolhouse in an intelligent and effective way, our fingers certainly touch the pulse of the coming man and woman, and, through them, we minister to succeeding generations. From the beginning of our State's history we have been growing up to a realization of the immense significance of "The Little Red Schoolhouse," as it relates itself to the intellectual and moral status of our people. We know, in some measure at least, what is its influence upon the intellectual and moral development of the community. The idea also grows that this same schoolhouse is somehow intimately connected with the business prosperity of the people—that "book larnin,' " once a mere accomplishment of the few, has its value in dollars and cents, and may make itself felt in the growing of crops and in the market places.

Considered as a mere business enterprise, the school easily outtops all others. Indirectly every one contributes to it and is a member of the corporation. Its capital, its income, and its expenditures are measured by millions. It has a great organized army of servants and agents, and the whole realm of childhood and youth is in its possession. We of middle age have seen a great and intelligent awakening of public interest in all that pertains to our school system, and have had cause to rejoice in its results. We have seen

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a thorough revision of the whole scheme of education, a widening of its scope, a reorganization of its forces, a revolution in its methods, a concentration and adaptation of its agencies. We have seen system evolve out of disorder, and intelligent and specific direction and purpose take the place of haphazard effort. More and more the public school is enlarging, or seeking to enlarge, its influence over the man that is to be. About the bare tripod of the three R's are assembling all the agencies of culture and of intellectual and moral help. Some of us are old enough to remember when the old "Deestrict Director" was jealously regarded as a supernumerary, when the "County Examiner" was grudged his title and miserable fee, and when anything like a real assertion of jurisdiction or control in any material way would have been quickly resented.

But the patience of intelligent and persistent effort has been so rewarded that we see our whole public proudly rejoicing in the splendidly equipped system of today.

I have tried to realize the extent and the importance of the official trust I assumed in accepting the position of Secretary of a County Board of Health. Reflection and experience have led me to believe that the most interesting and responsible phase of that trust is the relation in which it brings me to the public schools and the educational forces in charge of them. If we would teach the laws of life and health, we must get into contact with the teachable. We must cleanse the fountains if we would have pure waters. I am not going to stop to talk to you doctors about the agency of the school in the dissemination of disease. Nor is it within the topics assigned to me to discuss their tendencies to produce disease. I want simply to emphasize the importance of our official functions so far as they relate to the public school and education, and to make a few practical suggestions in relation thereto. I would begin by stating that we should impress upon ourselves and others that our office has a real and practical connection with the school system. It is true that we must, in most instances, find approach to those schools through the regular school officers; but as to the matter of sanitation, our access is more direct, and in the matter of epidemic and contagious diseases, our authority is plenary. I think that there is a feeling of apprehension among the thoughtful and observant, and especially among our own profession, that present

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educational efforts tend too exclusively toward the development of fruit and flower at the expense of the root and trunk. We are not realizing as fully as we might old Juvenal's prayer for "a sound mind in a sound body." I am not pessimist enough to believe that our race is decadent, or even nonprogressive in the matter of health and longevity, but I feel sure we do not utilize, as fully as we might, our educational system as a factor in promoting the health and strength of our race. We have scarcely yet arrived at the point where there is a profound and universal conviction that our schools must not be permitted to contribute to the deterioration of the health of the pupils and of the community. The educational idea is so fixed on the gray matter of the brain that the red corpuscles and the heart beat are scarcely thought of in connection with child-training at school. The functions of the modern pedagogue seem scarcely of kin to those of his ancient prototype. The modern one is so intent in leading the mind along the paths of learning that he seems sometimes to have little thought for the weary and uncared-for body that lags in the race. There is pressing need that the educational idea shall continue to expand until the laws of physical life and health shall find some place in the school curriculum. It is our duty as Health Officers, and we should esteem it a privilege as well, to have regard for the physical well-being of the school population and to become co-laborers with the educational forces, not only in protecting the community from the dissemination of disease through the agency of the public schools, but also in making those schools most helpful agencies in teaching and enforcing the laws of health.

We shall never be able to make our health laws what they ought to be to the community until we shall have trained a new generation and prepared it to receive and administer them.

We have a hint here as to how we shall visit the great-grandfather of the future patient. Our journey will be of necessity somewhat circuitous. Possibly it will lead us first to the house of our member of the Legislature. We shall want him to bring the school trustee, the county superintendent, the teacher and the Health Officer into closer relation to each other, that each may better support the other in teaching and enforcing the laws of health. We shall want to call on the State Superintendent and

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State Board of Education and persuade them that nature's laws relating to physical right living are worthy of companionship with the laws of mental training and development, and that they should have more conspicuous recognition in the school curriculum. The examination questions submitted by them to teachers might be none the less valuable should they test the teacher's capacity to recognize the foes to his pupil's health and life that may lurk in and about his schoolroom. I would emphasize this point. If the public school is to contribute anything to the preservation of public safety from contagion and epidemic, or anything to the development of a stronger and healthier race, there must be a beginning point where public interest shall manifest itself and public authority assert its purpose. When the school authorities, beginning with the chiefs of the system, shall take this matter in hand in real earnest and make the matter of public health distinctively a part of public education, distinctively a part of the teacher's qualifications and responsibilities, shall bring it into the county institute and the teacher's associations, when the law shall compel the trustee to first procure the Health Officer's approval of his proposed site and plans for the new schoolroom or house, for the water supply and conveniences, and when the county superintendent shall stand guard along with the Health Officer over these laws and regulations our battle with epidemic and contagious diseases will already be half won, for we shall soon have prepared for us a generation that will regard the laws for the preservation of public health as living statutes; a generation that will regard the Health Officer as a beneficent public servant rather than as a predatory aggressor against private rights for his personal gain. Our profession has emerged far enough from the age of charlatanism and humbug, from pseudo mystery and blatant quackery, that we can afford to take the public into our confidence. Why should the simple A, B, C's of the physician's lore be a sealed book to the public at large? Does nature maintain her signal service for the profession alone? Shall her danger signals remain as if flashed in cipher language of which only the physician holds the key? Why should not all those who have the guardianship of precious lives be made sufficiently acquainted with these signals that they may distinguish health from disease—that they may at least know how and when to protect the whole flock from the contagion of one member?

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I do not know why the simple manual, descriptive of the symptoms of the ordinary communicable diseases which are apt to assail our schools, might not form part of every teacher's stock in trade and might not so instruct such teacher as to make him a much more effective protector of the health of the school and of the public. We might not demand that the teacher shall be able to distinguish between pemphigus and smallpox, but there are certain broad symptoms that attend every communicable disease which are easily recognizable, and, while they may be common to other ailments also, still their presence should signal possible danger and the teacher should have such knowledge as to be warned thereby. The County Health Officer should seek to form a very close alliance with the county superintendent, the school trustees and the teaching forces of his county. Without their aid and sympathy, the schools will become a menace and hindrance to him in the prosecution of his duties. Without the intelligent co-operation of the trustees in locating, building and equipping schoolhouses, we may find sure provision for ill-health and contagion laid in the very foundation of the school building and developed throughout its whole plan. I have experienced serious trouble at this point from officers whose views were fixed and stiffened before sanitary science had invaded the field of their training. They resented my interference with the plans of proposed school buildings as an impertinent and unwarranted intrusion in matters that did not concern me. It is this sort of experience that leads me to think that our sanitary regulations so far as defined by public statute, should find distinct recognition in the statutes regulating the duties of every class of officers required to co-operate with the Health Officer. If the laws relating to the building and fitting up of schoolhouses were so framed as to compel the officers having that duty in charge to consult with the Health Officer and conform to his directions in the matter of sanitation, there would be much less room for jealousy and conflict.

It is widely known that we had a serious invasion of smallpox in the western portion of Owen County during the fall, winter and early spring months about a year ago. The disease was central at Clay City, a few miles from our western border, and entered our county at different points. For a while the situation was alarming

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to all who really understood it; all the more so because the type of the disease was mild and dealt so leniently with the majority of those attacked that the public fear was not sufficiently aroused to stir the people up to vigorous and active resistance. It did cause a number of deaths, and other cases which recovered assumed serious and alarming features. Had only these very serious cases occurred, there would have been little difficulty in securing united effort to suppress it, but the added multitude of milder cases seemed to arch in front of graver ones and to quiet apprehensions of danger. Certain ones of our own profession aided its progress by giving it a certificate of good character and turning it loose to roam at will. In certain quarters it was a matter of serious debate whether it was the disease or Drs. Brayton, Hurty and the local Health Officers that ought to be quarantined. It was fortunate for our people that the character of the disease had become pretty well understood before it broke into our county and that the mind of the general public had been prepared to resist it. The Health Officers met it with all the diligence and vigor we could command, and our medical men, school officers and teachers rendered all possible assistance. I utilized very successfully two cases which were among the first that occurred. They were of severe type and repulsive in appearance. I caused photographs of them to be taken and placed the pictures in public places to serve as object lessons. The average layman who saw them was as well prepared as his family doctor to judge of the value of a lecture on Cuban itch and pemphigus, as a contribution for the relief of the situation. The disease did not get into the schools, for we met it at the outer and safer lines of defense, and did not suffer it to approach them. I put myself in communication with the county superintendent, trustees, teachers and schools themselves, physicians, postmasters and merchants, and through these various sources tried to bring the whole of the threatened district under close and constant supervision. It was thus that I was reminded how important an aid the teacher and his school may become to the Health Officer, for through them I could gather up every rumor of danger. The vaccination of pupils was enforced and a rigid exclusion and quarantine of all who had been exposed. The Health Board also gave the matter of public assemblies their attention, and, as a rule, found

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the people ready to conform to requests or directions in this regard. It was by such means as these that we dealt with the matter of closing of schools during our epidemic. By great vigilance we closed out the disease and kept open the schools. We used the privilege of continuing the school as the incentive to all who were interested in it to join in the fight against the enemy.

As to this matter of quarantine, I would pause to add this: All of us who have been called on to attempt it have experienced the difficulties of enforcing it and the hardships that attend it. It places the whole family in most irksome isolation and affects all others who, for any cause, would visit them. It takes the bread winners from their employment and often cuts off every source of income. It threatens the loss of employment for the future or it may very seriously affect a business enterprise or investment. All these matters demand serious consideration in connection with the proposition to establish it, but they must all yield to the necessity of preventing the spread of contagion. It, at the best, is a serious misfortune to the persons affected, but it is a misfortune that can and should be largely shared and alleviated by the community at large. We should insist that provision be made by such community for thus sharing it as far as possible. The family quarantined are the prisoner guests of the public and should be supported while thus in custody and every attention to their comfort, possible to be given them, should be cheerfully extended. This is not difficult to effect if the Health Officer will but summons prudence and tact to aid him, and it is only by such reciprocal sacrifices on the part of the community and the prisoners that a quarantine can be made effective. I might add that a community which will not thus bear its portion of the burden does not deserve protection except for the merit of the innocent ones in their midst.

The invasion of smallpox above referred to found us in a situation not always prevalent. We knew the enemy was approaching and would soon be in our midst. We had time to prepare for him. We immediately rallied about the public schools, the church assemblies, the public funerals, all the places and occasions that assembled the people together. We prevented some such assemblies, we conditioned others, we made the schools our allies instead of allowing their capture and enlistment in the opposing ranks. We

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could not suppress all the fools and we did not kill any of them, but their influence became quarantined by a wall of ridicule, which, as occasion provoked, assumed the aspect of menace and warning.

But these epidemics do sometimes get into the schools and perplexing conditions arise. I can no more advise how to treat those conditions than I can tell you how to treat your future patient who is yet in perfect health. The one thing that the Health Officer should impress upon his mind and conscience is that the school thus attacked is his patient, a patient that the law turns over to his charge and for which he is responsible. The notice that contagion is there should be treated as an emergency summons and met with the promptest response. A conference should be had at once with the teacher, the trustee and the most intelligent of the patrons. From these he should learn the whole situation, and not forgetting that his decision must govern, the officer will so direct his consultation that such decision shall be based on the soundest reason and, if possible, shall commend itself to the approval and hearty support of all. There should be no hesitation as to the suspension of the school if it shall seem probable that such a course will ultimately prove necessary. The keynote of success is promptness and vigor at the start.

I do not regard such a visitation as smallpox as the scourge most to be dreaded by the Health Officer, especially if it shall present itself in its more rugged aspect. It is the soft-footed and half-domesticated beast—such as measles, whooping-cough, scarlet fever, diphtheria, etc., that is most to be feared. They are such old-time and familiar visitors that they seem almost to have established a prescriptive right to sojourn with us from time to time. As to the first two, measles and whooping-cough, the old-time country school was expected to distribute them through the neighborhood just as it did the itch and the variegated samples of head lice. They seem yet in many localities to be regarded as foreordained experiences on the road from childhood to maturity, a kind of physical disturbance as natural and necessary as those incidental to teething. I am amazed sometimes at the density of the stupidity I meet with in connection with these old-time contagions and no less so as to the quarters where I find this stupidity intrenched. So fixed is the idea that every one is fated, at some time in life, to

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exhaust this catalogue of maladies, that we can induce no sort of care to avoid them. As well talk about quarantining against the processions of the seasons. Instead of heeding the instructions of the physicians as to how they may be avoided, folk lore is resorted to to determine what season of the year and when "the sign is right" for contracting them with least danger and inconvenience. It would surprise the inexperienced to learn with what promptness and fierceness the interference of the Health Officer is often met in cases of this kind. Only a few weeks ago I learned that an epidemic of measles was in progress in a certain part of my county. I had on file at my office the official reports of twenty cases then in progress there and had reliable information of several cases not then officially reported.

I learned that a young lady lay at the point of death with it (she died next day), and that a neighboring lady of average intelligence was proposing to send her child over there that it might catch the disease. Humanity and official obligation prompted me to call the lady to the 'phone and to suggest to her the danger and responsibility she was about to risk. The quick and blazing response I received made my 'phone feel like a live wire. A good neighbor lady on the same line whose ear happened to pick our controversy off the wire, joined in the chorus and I—fled. I had learned though that that crop of measles was the common property of that neighborhood and that these families had determined to have their share of it before the supply was exhausted without regard to consequences. I reported the facts to the State Health Officer and they got into print. The next week an anonymous writer assailed me through the neighboring paper as a slanderer, a meddler and liar, and offered to prove by the same doctors whose certificates I had on file that there was no such malady in the neighborhood.

Do you ask, "What can the Health Officer do, where such a disease invades the school in a neighborhood like this?" He can only strike at the symptoms—for the malady is located outside the schoolroom and in the minds of the parents.

Quarantine and the prosecuting attorney may aid, but perversity will prevail when backed by the approval of the community. The real remedy is an educational one. We must break down the fixed and false conviction that every child is foredoomed to have

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these diseases. We must make it thoroughly understood that there is no more excuse for having these diseases widely prevalent than there is for having smallpox a universal scourge. Could these good people be made to know that there are communities without number where these maladies are almost as rare as smallpox, where nine-tenths or more of the people live and die without ever contracting them simply by observing a degree of prudence not at all onerous, we will have established the beginning of reform. We can't make people quarantine against death from senile decay. People solicit the approach of these diseases to their children simply because they regard them as inevitable and think the period of youth is the safest period to encounter them, and when death or other serious consequence follows, they resignedly accept it as unavoidable, a dispensation of Divine Providence, a natural death.

Following our instruction that these diseases can be avoided, we should strive to make the people understand how very serious they are. If some velvet-footed animal were stealing through our State year after year marking his path by thousands of cases of sickness, more or less severe and protracted, by large expense for medical aid, by anxious hearts of parents, by loss of time to the laborer, by interruption of schools and business, by hundreds of bright eyes destroyed or dimmed, by hundreds of quick ears ruined or dulled, by the prophetic hectic on scores of cheeks, by the hollow cough telling of the fatal wound, by about 500 fresh graves every year, our help would not be needed to drive the whole people into arms against the marauder. But such is the annual record that measles is writing against itself in our commonwealth. And yet fond and foolish mothers coddle and toy with this malignant beast and invite it to become their guest.

We have been clothed with some measure of official authority to battle against diseases like this for the life and health of our fellowmen. I have tried to be diligent and faithful in the exercise of this trust. But as often as I have been called to meet these scourges the autocrat's aphorism comes back to me. My visitation is too late. Some one, alive to duty and opportunity, should have been sent to the grandfathers and grandmothers of the children of the present day to teach them that all these pests are largely subject to the dominion of man and that man himself, in most cases, is responsible for them. I am more and more im-

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pressed with the belief that the burden of this fight against them must be borne, not by our profession, but by the educational forces of the country, and I include in those forces, not the schools alone, but the press, the pulpit, the rostrum, all the agencies for the dissemination of knowledge. Ours is the surgical and relief corps which gathers up the wounded, ours is the pioneer corps that pilots the way, but teaching, teaching, teaching is the need of the hour. Until the teaching forces are made to realize that the laws that send the blood through the body, and the air through the lungs are from the same source that sends the planets around the sun and speaks redemption to a soul, and fully as worthy of study and application, the war against these diseases will continue to be a series of guerrilla skirmishes. I do not underestimate the importance of the office which we hold, nor the beneficence of the statutes which assign our duties, they are already excellent and productive of a rich return to the public; they will be still further improved and enlarged, but I feel that the step to be taken which is now most important is the bringing of at least the elements of sanitary science into our system of school laws. I do not forget that we have text-books on anatomy, physiology and hygiene, which some of the pupils reach and study if they hang on long enough. But the A, B, C of personal habit has been acquired and fixed before that period is reached and the lore of these text-books bears much the relation to personal guidance and training that geography has to the raising of crops. But in addition to the instruction of pupils in the laws of health and their training as to bodily habits, I would have the whole educational force charged with the duty of co-operating with Health Officers in the performance of all such of their functions as are connected with public schools. I would put the physical man in evidence in these schools much more conspicuously than he is today. The laboring forces of the future might have less to forget about Plato and his Republic, but they would have a better equipment of muscles and rear a healthier brood of children, and even the future scholar would carry a better body and more capable brain into the fields of higher learning.

The removal of the predisposition to disease is the most thoroughgoing way of making all infectious disease impossible, and in this direction much practical advance has been made. It seems to me

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indeed that in demanding full consideration for this question, hygiene carries within itself a powerful educative force for social healthfulness, the significance of which the future hygiene of the race can perhaps hardly be divined. This force, however, can make itself felt only through a general sanitary education, and this education must begin at home and continue through the common schools. Our educated youth, instead of fuddling themselves and killing time in smoky rooms with foul air and but little sunshine, would do better to develop the body by strong gymnastic sports and athletic games. I am glad to notice that our educators generally are encouraging manly physical exercise in athletic games. Our colleges and universities are doing a great deal toward developing a stronger and healthier race.

Gentlemen, if you have suffered your expectation to be guided by our printed program, I feel sure I have disappointed you by the manner in which I have treated the topic assigned to me, but I have tried to cruise within signal distance of the general subject suggested by the text. I realize that what I have said might have appeared fully as relevant had my name been printed under any one of several other themes printed on the same program. But, like yourselves, I am but a laborer in the outlying provinces. In preparing this paper, I have simply cried out from the midst of my environments and difficulties and tried to voice some of the more important suggestions, those environments forced to my attention.

I have scarcely referred to some of the points suggested by the program for my use, knowing that I could not aid a body of medical men, learned in their profession, by dealing with them. I have tried to reach the public outside, to which we must all appeal for help, and in some effective way, before we can accomplish what we ought toward making this great commonwealth, which God has so blessed, the kind of abiding place He would have it be.

Spencer, May 7, 1900.

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DISCUSSION.

Dr. Hurty: I want to inform the officers present what we tried to do in the matter of sanitary schoolhouses in the last Legislature. Mr. Jones, the Superintendent of Public Instruction, went among the legislators and found among them two men who were school teachers, and he brought them to my office. We worked together to get a statute framed that would require that hereafter all schoolhouses to be built should conform to the requirements of the statute, which was known as House Bill 455, and was introduced by Mr. O. G. Davis, of Wayne County.

I want to call your attention to the excellencies of this bill, and yet it received, after full exposition, but nine votes in the House of Representatives. A man who is an editor in this State, a man who had been a reporter on the great Courier-Journal, arose and talked about the foolishness of microbes, the nonsense of transmissable diseases, etc., until he talked that bill to death. There is a lesson for us. We must not get out of patience, or get angry with that poor fellow. Not at all. He is to be pitied. He does not know and does not understand; and, as we all know, ignorance is the only sin.

Professor Kendall, Superintendent of the City Schools, took the bill before the high school teachers and the principals of the Indianapolis schools, and they went over it and endorsed every word in it. You see it was pretty well considered, for besides, it was submitted to the Superintendent of the State.

Those who have listened to the reading of the bill will, I am confident, say if it had been passed that in the next ten years the number of short graves in Indiana would be greatly lessened, and the number of cases of consumption, pneumonia and diseases of the air passages would be lessened also. Each requirement in the bill is in accordance with well known sanitary laws; and it was simply intended to save money for the people, to save them from disease and unnecessary deaths, and in that way promote the general happiness. Yet the bill received nine votes in the General Assembly of the State of Indiana! I tell you, gentlemen, we have a great deal of educating before us.

The health law says that the State Board of Health shall have the power to regulate and prescribe the ventilation, the plumbing,

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the heating and other sanitary conditions in all public buildings. You may say, "what is the use of this bill if the State Board of Health has that power?" It has that power and can exercise it and execute it through the courts. Here is the trouble with the State Board enforcing that law. Each schoolhouse has to be fought out by itself under the State Board of Health rules. We have to find out the location of the schoolhouse, we have to serve the notice on the trustees who are having that schoolhouse built, and then follow them up and see that the orders are carried out. Gentlemen, that is a prodigious job! We have 1,013 townships in this State, and the State Board has only a small appropriation, $6,000, for doing all its work, and $6,000 would not do the work alone of looking after the sanitary construction of schoolhouses. Now, note that this law would have enforced itself. Why? Because contractors could not build schoolhouses and have valid claims unless the buildings were sanitary. That law would have brought every set of plans into the central office for approval. The question was asked: Why not submit the plans to the local Health Officers? That would do all right in a majority of the counties in the State; but you all know that there counties where it would not work at all, because among us are some men who do not know a single thing about those matters. Then the local officers may be changed every four years. The best way is to provide for sending the plans to the central office where proper attention can be given to it. You officers do not give your whole time to this work, and it would impose a burden upon you. The plans of every schoolhouse would have to be approved before the claims of the contractor would be valid. I hope some one will introduce a resolution showing that this bill receives the endorsement of this body, and that it is heartily recommended to the next Legislature, and it will certainly come in time.

Dr. Kennedy, of Morgan County: The paper read by Dr. Cox is so good, and the remarks made by Dr. Hurty were so appropriate, that there is not much left to be said on the subject. I can not, however, refrain from saying a few words. I live in a town of 500 inhabitants. It has been incorporated for three years. About the time it was incorporated our schoolhouse was burned down—a circumstance which was not altogether a misfortune. The old building was too small and was built close to a railroad. The

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new building is built very nearly like the plans laid down in the bill read by Dr. Hurty. I was consulted as to the building, and I advised the employment of a good architect. A firm of architects who furnish plans and specifications for such buildings were consulted. The result is a school building after the plan laid down in the bill. The building is a credit to the little town. I have directed teachers as to the proper admission of light, and as to the examination as to the eyes of the children. I advised the employment of a good oculist or optician, and that the children with defective vision should be fitted with proper glasses that they might not permanently injure their sight. On my visits to other neighborhoods I have noticed school girls with spinal curvatures. A good deal of this is caused by improper positions at their desks. I have advised the teachers to watch for this sort of thing and to correct it. I think all of you who have anything to do with the schools should instruct the teachers to notice carefully the position the girls take at their desks.

In relation to the prevention of contagious disease. I have been successful in preventing the spread of diseases in our village. I have been able to do it easily, because I have secured the confidence of the people. I have also the friendship of all the doctors in the vicinity. It is more our duty to prevent disease than to cure disease.

On motion of Dr. Proegler each person present was limited to five minutes for the discussion of any paper.

Dr. Bence: I have a resolution or two I would like to introduce. Among the older Health Officers who have been accustomed to meet here in the past years we have always observed a vacant chair. It is painful to me to come here and miss Dr. Hibberd. He has been a Health Officer continuously from the organization of the Health Board until this year. Now his limbs fail to do their duty. I think Dr. Hibberd is about eighty-seven years old. His mind is as clear as it ever was, but his feet refuse to carry his body. He is at home to-day, but he is thinking of us.

I move you that this conference adopt a resolution and send it to Dr. Hibberd. I offer the following:

"Resolved, That the Eleventh Annual Conference of Health

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Officers send greetings to Dr. J. F. Hibberd, of Richmond, the Nestor of scientific medicine and sanitation in Indiana."

The resolution was adopted and the Secretary was instructed to send the message to Dr. Hibberd at his home in Richmond, Ind.

The following resolution was offered by Dr. Bence:

Resolved, That this Conference of Health Officers heartily endorse the late House Bill No. 455, that met so untimely a death in the last Legislature, and would recommend it to the next Legislature for passage, believing it is in the interest of the school children of the State, and we pledge our influence to secure its passage when introduced.

On motion the resolution was adopted.

The Committee on Nomination of Officers for a permanent organization reported as follows:

We, your Committee appointed for the purpose of presenting three names as permanent officers of the organization for the year, beg leave to present the fololwing:

1st. President, Dr. Brose S. Horne, of Bluffton.
2d. Vice-President, Dr. N. D. Cox, of Spencer.
3d. Secretary, Dr. A. E. Powell, of Marion.
4th. Treasurer, Dr. H. A. Cowing, of Muncie.
5th. We recommend that the first meeting of the permanent organization meet at Indianapolis, Ind., on the last Monday and Tuesday of May, 1901.

Respectfully submitted,

J. G. ROSS,
R. BOSWORTH,
G. W. SHEPHERD,
Committee.

On motion the report of the committee was adopted as read.

The Committee on Constitution and By-Laws reported as follows:

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CONSTITUTION OF THE INDIANA HEALTH OFFICERS' ASSOCIATION.

ARTICLE I.

NAME.

The name and title of this organization shall be the Indiana Health Officers' Association.

ARTICLE II.

OBJECT.

The object of this organization shall be the advancement of sanitary science; the protection of the interests of its members; the extension of the bounds of medical science, and the promotion of all measures adapted to the preservation of public health and the prevention of disease.

ARTICLE III.

Section 1. Any Health Officer, or deputy, who is in good moral and professional standing with the Indiana State Board of Health, upon signing the constitution and paying $1.00 to the Treasurer, shall be entitled to full membership in this organization, and shall receive a certificate of membership.

Sec. 2. Each member of the State Board of Health is hereby declared a member of this organization.

ARTICLE IV.

OFFICERS.

Section 1. The officers of this Association shall be a President, Vice-President, Secretary and Treasurer.

Sec. 2. Each officer shall be elected by a majority of all the members present, at the annual meeting, and serve one year from the date of such election, or until their successors are elected.

Sec. 3. In case of the death or retirement of any officer of this Association, the vacancy so created may be filled by the appointment of a successor, by the President of the Association, to fill the unexpired term.

ARTICLE V.

DUTIES OF OFFICERS.

Section 1. The President shall preside over the meetings, preserve order, and perform all such other duties as custom and parliamentary usage may require; he shall have power to appoint all committees.

Sec. 2. The Vice-President shall perform all the duties of the President in his absence.

Sec. 3. The Secretary shall keep correct minutes of the proceedings of the Association, and when approved, shall fairly transcribe them into

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a book kept for that purpose. He shall have charge of all papers, books and records belonging to the Association, excepting such as may belong to other officers and give notice of meetings of the Association. The Secretary shall be vested with power to purchase all books stationery and necessary supplies required for the proper transaction of all the business of this Association, and shall certify said bills to the Treasurer, who shall pay the amount required upon the presentation of said bills.

Sec. 4. The Treasurer shall give bond in the sum of $500, with good and sufficient security, or such further amount as the Association shall require, and shall collect all moneys belonging to the Association and disburse them as may be directed by the Association. At each annual meeting he shall file an itemized report, giving the condition of the treasury.

ARTICLE VI.

QUORUM AND AMENDMENTS.

Section 1. Two-thirds of the members present at any meeting of the Association, after the Secretary has issued written notice to all the members thereof one week previously, stating in full all amendments proposed, shall be competent to alter or amend this constitution.

Sec. 2. Ten members shall constitute a quorum to do any business, except alter or amend the constitution.

ARTICLE VII.

POWERS AND DUTIES.

Section 1. The Association shall have full power to adopt such measures as may be deemed most efficient for mutual improvement, for exciting a spirit of emulation, for the dissemination of useful knowledge, for promoting friendly intercourse among its members, and for the advancement of sanitary science.

Sec. 2. It shall have power to raise money, from its members, for the purpose of securing its objects, by a tax, which shall not exceed $5 annually on each member.

Sec. 3. It shall have power to adopt a seal for the use of the Association.

Sec. 4. It shall hold at least one meeting each year, the meeting place to be decided upon by vote of the Association, at each previous meeting.

ARTICLE VIII.

Every proposal for altering or amending this constitution shall be made in writing, and filed with the Secretary at least ten days before the meeting at which such amendments shall be considered.

ARTICLE IX.

PLEDGE.

In order the more effectually to secure the object of this Association, we, who hereunto subscribe our names, do agree with, and to each other, that we will faithfully observe all the requirements of the constitution, and do all in our power to promote the interests of sanitary science.

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ARTICLE X.

HONORARY MEMBERS.

Any person distinguished for his attainments, members of Boards of Health, or ex-Health Officers, who are in good standing with the State Board of Health, can be elected as Honorary Members of this Association by a vote of majority present at any meeting, and upon being elected, said Honorary Members are entitled to take part in the meetings.

ARTICLE XI.

Section 1. It shall be the duty of the Secretary of this Association, sixty days prior to the annual meeting, to drop from the list of members the names of all members who have not at such time paid all dues to this Association.

Sec. 2. All applications for membership in this Association shall be handed to the Secretary and read to the Association for action.

ARTICLE XII.

SEAL.

The seal of the Indiana Health Officers' Association shall consist of, and be similar to, that now in use by the State Board of Health, except that the words in the margin reading "Indiana State Board of Health, instituted November 3, 1881," shall be changed to read "Indiana Health Officers' Association, instituted May 27, 1901."

BY-LAWS.

1. Calling Association to order.
   The President or Vice-President shall call the meeting to order, or in case of their absence, a chairman shall be appointed pro tem. for the purpose.

ORDER OF BUSINESS.

2. Roll.
   The Secretary shall call the roll.
3. Minutes.
   The minutes of the previous meeting shall be read and approved.
4. New Business.
   Receiving applications for membership, and members, and introducing visitors, etc.
5. Reports of Committees.
6. President's address.
7. Presentation of subjects for discussion.
8. Election of officers.
9. Unfinished business considered.
10. Adjournment.

A recess of twenty minutes was taken to allow the members of the Conference to call on Governor Durbin in his office.

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The session was reconvened at 4 p. m., and the following paper presented:

THE ARISTOCRACY OF HEALTH.

BY W. J. FAIRFIELD, M. D., ANDERSON, IND.

It is generally recognized that national, state, county and municipal Health Boards render invaluable service in restricting and preventing epidemic and epidemic diseases. It is they who enforce quarantine laws, and such controlling measures and hygienic regulations as to best protect and promote public health.

But, looked at from one standpoint, it is doubtful if this public health work be in the best interest of the race. It protects the weak at the expense of the strong, by extending the life of the frail and sickly—those who, with hereditarily defective and depraved systems would otherwise die early, under the operation of the inexorable law of natural selection. These weak, lower types of the race, with their tenure of life extended, mingle and intermarry with the strong; and thus the individual longevity of the strong is materially decreased. And so, as foretold of old, "the race is not to the swift, nor the battle to the strong." The law of natural selection is a weeding out process to grow and produce the best. But the genius of Christian civilization demands the uplift of the fallen, champions the cause of the weak, and puts in operation through its law of humane control, public sanitary forces, which, controverting nature's weeding-out method, safeguard the weak, and in a sense, leave the strong to look out for themselves. But what would you—

> "Spurn thou the weak, the Eternal is thy foe.
> If that thou hast the gift of strength, then know
> Thy part is to uplift the trodden low."

It is not the province of this paper to enter into any lengthy discussion along these lines, but enough may be granted to raise the serious question, is not, therefore, our race stock deteriorating? At first thought this question may appear absurd in view of the fact that the average length of life has been doubled within the last two hundred years. But when we remember that this increase of the average age of man is not from extending the span of the strong and vigorous, the representative type-form of the race so much as

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of the weak and lopping branches of the life tree, we can readily see that the question is most pertinent.

If the normal type-form of the race is pathological with more or less organic derangement, then the question must be answered in the negative.

If the normal type-form of the race is physiological, all the organs being perfect in structure and function, then the question must be answered in the affirmative.

If our increased average longevity were the combined result of increasing the number of aged people, and of extending the years of the puny and degenerate, we could come to no other conclusion than that the constitutional vigor and vital capacity of the race were increasing, or rather were being less fettered. This would mean that the weak and the strong alike were afforded better and increasing opportunities for living.

But public sanitation in its results does not balance up to this proposition, does not show equally well for both the strong and the weak. While it is lengthening the life line to the weak, it is at the same time, shortening it to the strong. A review of its work thus far does not encourage the writer to expect, that, without a broadening of its methods, there will be very much farther increase in the average length of life. In fact, the increasing number of degenerates, criminals and constitutionally tainted which statistics reveal, and the increase of chronic diseases due to overwork, fast living, feminine and effeminate indolence on easy street, pernicious narcotic habits and over-indulgence in various ways, make a formidable force working to shorten life, and filling us with foreboding that our present average life of 42 years will not be maintained.

Sanitary science must introduce into its legal lines of work restrictive and prohibitory marriage laws. This much counterbalancing protection is due to the strong—is imperative for the general welfare.

If man were not the paragon of all animals, the ruler of himself, if over him were placed a higher order of material life, his stock might be improved in much the same way that we improve our domestic animals. The science of domestic animal breeding and culture has been so rapidly developed within the last fifty years as to be almost an exact science. Through its application different types

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of animals may be produced almost at will, to meet the requirements of man, the master.

Human life, however, above all sordid barter and slavery, is placed upon the high plane of equality and liberty; and the problem of its uplift must be worked out, not for the weak alone, nor for the strong alone, but for each and every individual regardless of his status in the scale of life.

The first and greatest leader in this work was Moses. He stands unique in history as the great master sanitarian of the ages. Broad and comprehensive, he saw the whole need of a down-trodden, degraded race, and with marvelous skill and wisdom, he taught and trained the Israelitish host to become the greatest sanitary nation of the world.

No doubt the Jews, when delivered from Egyptian bondage, had many weak and puny in their ranks; but by the wise application of both public and individual hygiene, deteriorating forces were checked and the natural powers of life restored; thereby affording at the end of 40 years the greatest exhibit of the rational, scientific healing of a nation that has ever been recorded.

The sanitary code of Moses, a recognized model even to the present day, included minute instruction about diet, cleanliness, clothing, domestic sanitation, disinfection, quarantine and marriage. This wholesome and enforced hygienic regime, the training in morality and religious principles, the out-of-door life, the marching and counter-marching under the wisest and greatest drill master the world has ever produced, led this semi-barbarous people up to the level of a godly race where there was not a feeble one among them. And Moses, what a splendid specimen of manhood, 120 years old, athletic, eyes undimmed, and all of his natural forces unabated. And what a splendid, full, rounded, complete gospel of deliverance he taught and demonstrated, redeeming from physical as well as moral degeneracy.

The crying need of to-day is for the forceful preaching of this physical whole-man-salvation gospel. We turn to the churches, but the churches, devoting their time to catechisms and creeds, stained glass and steeples, cults and fashions, overlooking the broad, necessary, every-day, humanitarian and sanitary principles of Christianity, what can they do?

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The gospel as it is preached to-day is not saving us. The gospel wagon, equipped with a preacher and a choir of sweet singers, goes through the streets of slum-town to spread the gospel, but it is a one-legged, a blue-sky affair. Slum-town needs a bread-and-butter, a bath-tub and scrubbing gospel, an industrial school gospel, to teach them how to work, to teach them good habits and the best way to live. The sanitary plumb line must be made to strike the landlords so that they will build proper tenement houses. We may ring the curfew bell, but what about the children who are driven from the street into a worse place, called home?

With slum-town on the increase, with insanity, idiocy, disease and crime on the increase, can the church consistently preach the near approach of the millennium? There were 10,000 murders committed in the United States in 1896, 1 to 7,000, a greater average than heathen countries give.

Disease and piety have no natural association. Sickliness is not saintliness, nor a symptom of an approaching epidemic of godliness. A bilious attack is not a conversion. A face reflecting the blues from an indigestion does not reflect religion. The so-called saints of the middle ages debased the body, never combed nor cut their hair, nor trimmed their finger nails, never bathed, and never renewed their clothes except with patches. This medieval doctrine that the soul is purified by debasing and abusing the body is responsible for a good deal of evil in Christian lands to-day. Upon a Sunday we still sing "Oh worthless worms are we." In the progressive Sunflower State, we find the epitaph:

> Under this sod, and under these trees,
> Lieth the body of Solomon Pease;
> He's not in this hole, but only his pod.
> He shelled out his soul and went up to God.

But this body is not a pod, nor a clod of clay for the church to ignore, neglect, abuse and throw away. Matter is indestructible. Force is indestructible. Matter and force make up the body, and every atom of our body quivers with the divine and wonderfully mysterious force we call life.

It is a fact not to be overlooked or undervalued by modern sanitarians, that Nature places a premium upon health and healthful living. The more natural the mode of living, the more abundant

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is life and the greater the freedom from sickness. A person with the health credentials of Nature is nearest immune, by far and away the best protected citizen from disease of any kind.

If our states and municipalities would imitate Nature and place a premium upon health and its maintenance, by inaugurating and carrying on an effective working system of individual hygiene, together with the present system of public sanitation perfected, such a foundation of prophylaxis would be laid as to eventuate in a health Gibraltar for mankind and a Waterloo for all pathogenic tribes. When the individual and the state co-operate to this end, better and longer life will follow, and an aristocracy of health will result which nothing but accident or ripe old age can overthrow. Learned college professors are advocating the desirability of building up an aristocracy based on the refined culture of higher education; naval, army and civil officials, an aristocracy upon pre-eminence of position; plutocrats, an aristocracy upon an array of wealth; and others, an aristocracy upon a lineage from kings, dukes, lords, or colonial ancestors; but these, like the house built upon the sand, when the storm of wind, rain and hail comes, will fall. The only aristocracy imperishable and worthy and able to outride the storms of life, is the one founded upon "a sound mind in a sound body," which can come only from a natural life, one of sobriety, clean living and of full compliance with sanitary laws.

This aristocracy promulgates the gospel of good cheer, the gospel of plenty. Our Pilgram fathers did not recognize this. Stern of visage, hewing to the extreme letter of the law, indulging in little or no song, with much fasting, harboring no pleasures for this tabernacle of clay except that of anticipation of future rewards, they shut out Christmas, and a bright, friendly, beneficent, generous, sympathetic, mutually helpful world.

But the mission of Christmas is infectious, and crossing the sea it infused the blood of all New England; warm hearted, full handed, a Christmas that cheers and consoles, that lights the land with a smile, that practices as well as preaches, emphasizing the fact that the religion which it celebrates is adapted to human nature and to human wants, and enjoins upon every one of us to nourish the physical man in the best manner possible, remembering that "as a man eateth so is he," and that "whatever defileth the body defileth the temple of the living God."

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This nation is fast becoming a world leading power, leading even in the fulness and abundance of this greater gospel.

England may have her roast beef, ale and plum pudding; France her absinthe, frog and horse meat; Italy her macaroni; garlic and fat geese livers, and Germany her lager beer, limburger, wienerwurst, and switzer, but give me the good old New England bill of fare, with her venison, baked fish and turkey, full of dressing, her buckwheat cakes and maple syrup, her sweet cider and goggle-eyed, feathery doughnuts, crisp, brown and golden; and her pie, New England pie, two inches deep, full mooned, size of a small cartwheel, with dromedary scallops all around its edge. Don't it linger in the mouth and taste good? Think of apple pie made of Rhode Island Greenings, or Pound Pippins; and mince pie, not Chicago or Cincinnati, nor Indianapolis, nor machine made, but the genuine, the mince with the true brand, not on the can, but in the article itself, so that it looks, smells, taste and feels New England all over, through and through, inside and out, and even in our slumbers gives us good old "down east" dreams. And that other delectable pie—um-um.

"How dear to my heart is the old yellow pumpkin,
When orchards are barren of stuffin' for pies,
When peaches and apples have both been a failure,
And berries of no kind have greeted our eyes.
How fondly we turn to the fruit of the cornfield,
The fruit that our children are taught to despise.
The old yellow pumpkin,
The mud-covered pumpkin,
The Yankee-ribbed pumpkin that makes such good pies.
We chop it, and slice it,
And stew it, and bake it,
And pass it around as the queen of all pies."

But this strong and generous diet of a strong race, is caught in the seething maelstrom of the modern business world, where the evil genius of substitution has crept in, where extreme sordid commercialism prevails, where the mad chase after the nimble and elusive dollar seems to have the right of way; and so the labeled, triple X, three-ply article the provision dealer sells us here in Indiana too often proves to be the shadow, not the substance, or but the shriveled remainder of a problem in substraction.

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By enacting a most excellent pure food and drug law, our State has made a beginning effort to protect our foods from substitution and adulteration. Two Legislatures, however, have adjourned since this enactment without the necessary appropriation being made for putting this wise and economic law into service. And as a result, to say nothing about the injury to life and health, there is annually lost to the State $4,000,000 or $5,000,000 from adulteration of food alone.

This aristocracy of health upholds the gospel of sobriety, a salvation from intemperance and drunkenness, the greatest cause of crime, insanity, disease and pauperism. Experiments and experience from all over the scientific world are strongly indicating that alcohol is neither food nor source of strength, nor even the best of stimulants from a medical standpoint, and could, with pronounced advantage, be dispensed with both in ordinary life and in medicine. This being true, removes the last trench withholding public sanitation from extending its aggressive work of restriction and regulation into the camp of king alcohol.

The tobacco and other narcotic habits, serious drawbacks to human life, are under the ban of this gospel. Yet, notwithstanding their recognized evils, and in the face of increasing hygenic knowledge, these enslaving poison habits are growing to an alarming proportion.

This aristocracy emphasizes clean living, recognizing that cleanliness is not only next to godliness but is godliness. The operative force of the gospel of purity would weed out a vast, festering mass of disease which is now living almost riotously upon the splendid vitality which is pushing the Anglo-Saxon race to the front; it would rob the operating table of the gynaecologist of the larger portion of his patients, stop filling our institutions for the blind, and solve the problem of social morality, and controlability of sexual passion.

The half is not told of the destructiveness of syphilis and gonorrhea, nor will it ever be known. Although it can not be accurately determined, it has been estimated that 5,000,000 of people of this country alone are tainted with syphilis, and that 90 per cent. of the men have or have had gonorrhea.

Without further touching upon detail, the whole working formula leading up to the establishment of an aristocracy of health,

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demands an ever increasing vigilance upon the part of the State in the exercise of her protective function, coupled with greater attention on the part of every individual to correct habits of life.

In devoting himself to the physical welfare of the human race the physician and the sanitarian assumes great responsibilities. In genuine scientific spirit, a worshipper in the sacred temple of truth, a devotee to progress, his whole life should be a constant, consistent and practical expression of the best type of humanitarianism.

His mission is the mission of the greater gospel. His analysis of the well of salvation finds it filled to the brim with the healing waters of sanitation. With his sole creed to extend life and to promote happiness, I hail him as a charter member of the new church, which is radiant with promise of a new heaven and a new earth.

DISCUSSION.

Dr. Gammel: I do not like the word "aristocracy," the way it is used there, when the democracy of this great republic is solving all those questions. I think we are solving these questions; we are doing away with the slums, we are educating and strengthening the minds of the weak, and all through our great democracy.

Dr. Hurty: The essayist spoke about extending the duration of life. The Governor also spoke upon this subject this morning, saying that sanitary science had made life longer. Recent researches say that the duration of life is determined by the needs of the species. Why do we live to, say a period of forty years? Why do a pair of eagles live about one hundred years? Why is it that horses and dogs have their period of life? The answer is found not in hygiene, or pathology or sanitary science, but in the needs of the species. The question is, "How long must they live on the average to reproduce their kind and perpetuate the species?" If this is true, we never can hope, by any sanitary means whatever, to extend the duration of life beyond that point, whatever it is, because there must be a revulsion. But this we can do by sanitary science, and I think it is the great object, that while we do live we will live more abundantly, we will live better and higher and more nobly—we will live the ideal life. Of the children that are born in the ordinary course to live forty years—assuming

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that that is the average duration—25 per cent. are cut off within one year, or four or five years at the most. Are all of those unfit? Do we say they are extinguished for that reason? I think not. A great many of them are extinguished by accident or by diseases that were communicated to them.

Dr. Fairfield: I used the term "aristocracy" in the democratic sense. I don't suppose we will ever have the aristocracy of health until we get into the "kingdom come," but we can have the ideal before us. If a man has any habits that reflect upon his ancestors, he had better begin to get rid of them. The paper was not to criticise the work of general sanitation that is done by the Health Boards; they are doing splendid work, but at the same time their work necessarily must be somewhat one-sided if it does not have the full and hearty support of the people. In presenting the subject this afternoon, it was as a balanced equation. We are unbalanced now. We want the Health Officers and physicians to come up to this standard, and then we can better help our public sanitation.

THE OPPOSITION TO SANITARY SCIENCE.*

History demonstrates that when an effort is made to raise the people above their ordinary life, that there is always opposition. In the twentieth century the fight will go on, and sanitary science will be called upon to take no small part in the conflict. It is to be hoped that those who are working for the cause will not grow intolerant. We must be patient and hold fast to the truth, intolerance obscures truth, destroys faith and obstructs the road to success. "If one is absolutely sure of his ground, he can be boundlessly patient and tolerant towards those who stand upon some other ground." We need but do our duty honestly to be excused for our mistakes. As Herbert Spencer says—"It is the duty of every one who regards a doctrine as true and important to do what he can toward diffusing it, leaving the result to be what it may." As advocates of sanitary science we are forced to meet disappointment, surrounded with commercial greed that attempts to destroy all the movements that are intended to uphold the supreme law

*Delivered before Eleventh Annual Conference of Indiana Health Officers, Indianapolis, Ind., May 27-28, 1901.

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of health, it appears that some excuse could be made if we, at times, do grow intolerant.

Appreciating that only a fraction of the good work sanitary science has in store for us has been accomplished, we can not grow weak, but must say:

> "I will go forth 'mong men, not mailed in scorn,
> But in the armor of a pure intent;
> Great duties are before me, and great songs,
> And whether crowned or crownless when I fall,
> It matters not, so as God's work is done."

When governed by a selfish spirit, men will resort to unfair means, and if circumstances demand they will not stop at even destruction of health. It appears that those who have only the gain of money in mind often resort to tricks that are vile in character, and, of course, these individuals wish to keep the people ignorant of what a great blessing hygiene would be to them. The commercial interests of the country offer the strongest opposition to sanitary science, for they well know, many of them, that the manufacture and sale of adulterated foods is in direct opposition to the principles of this science. They wish to continue selling deleterious foods, and impure drinks, they are no respector of persons, even the babe in its mother's arms does not appeal to their sympathy. Recently in St. Louis, 332 specimens of milk were examined and each specimen was found adulterated. To demonstrate the extent of this criminal practice of adulteration, I wish to call your attention to the Ohio Dairy and Food Commissioner's reports, which shows the following: Allspice, with cocoanut shells; butter, with oleomargarine; coffee, with roasted hulls of wheat and barley, crushed pebbles, cocoanut shells, peas, wood, bark, damaged blackberries, rye; out of twenty-two samples of cream of tartar, analyzed, not a single one was found to be pure. This is only a sample of what is being done all over the country. We have these conditions to face. Commercial greed stands out prominently before us, ready for a conflict. We must demonstrate to the people that sanitary science works at all times for their benefit. When this is accomplished, there will be a reorganization of our social state. Even in this day we can see that "The movement is grinding itself to happy issues." The ordinary observer can readily see that it is the people's welfare that should

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be looked after and not an individual's profit. The people become antagonistic to great movements only when they are ignorant of the true cause desired. So the constant demand is for education upon sanitary principles. There can be no question but that ignorance has in the past and always will obstruct the ways of progress. People should be taught that no matter what station in life they occupy, that they must lead natural lives. An artificial life leads to disease. The demand, in order to have health, is pure air, pure water and pure food. We know that drunkenness, vice, dirt, heavy labor, want of rest bring disease and death. These sanitary questions must be considered by the true follower of the science and if considered they are bound to lead him into the study of economics.

If what we have said be true, it must be admitted that many of the factory and commercial interests of the country must give way to the onward march of sanitary science before the whole people can receive that which they are justly entitled to—good health. With all these great questions before us, many, of course, will hesitate to make much individual effort to push ahead or act as leaders, to do so, personal interests can not be considered, for even in our present day—the embryonic stage—it is common to hear of the crucifixion of all the advocates of sanitary science who chance to get in the way of some progressive (?) manufacturing establishment, which did not care to be compelled to stop emptying poison into the mouths of the hungry multitude. We are sometimes sadly reminded by experience with these people that "sermonizing or lectures on moral philosophy" are not what are needed, but laws that will be enforced to punish all offenders; but often after obtaining such laws the "distinguished pleaders defeat justice while establishing points of law."

Give the common people knowledge and a chance to assert themselves, and, if this is done, we need have no fear for the future of sanitary science. Although the people are now ignorant of the great blessings modern hygiene has in store for them, it is not from this source alone the greatest opposition comes, but on the contrary, we discover that energetic antagonism arises from some of the so-called financial leaders of this country, that have factory interests and under a competitive system they do not wish

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to have their establishments changed or even have their products analyzed to meet the demands of sanitary science.

One prominent manufacturer made the statement that if a pure food law was passed and enforced that it would ruin business, for the reason that a great many retail dealers throughout the country wanted adulterated foods in order to undersell others who were their competitors. What is needed in this country, it seems, is to have some system that no longer offers a premium on dishonesty. Sanitary science brings an indictment against this commercial age and demands, for the sake of health and happiness, that "commercial cannibalism" be destroyed. Her laws demonstrate beyond disputation that people are being poisoned day by day. She places the individual who adulterates food or drink, in order to satisfy his "pigism," in the same class with all violators of law—a criminal.

In this friendly conflict with these factory owners, sanitary science says that it is useless for them to preach contentment to the overworked, unhealthy and much abused laborer, while they are maintaining an industrial town, furnishing the inhabitants foul air, foul water, adulterated foods, dirt and long hours of labor, and providing ill ventilated and overcrowded dwellings, the impure air of which occasions a languor and sluggishness which lead to functional derangement, and produces a profound feeling of depression, and causes the inhabitants of these unhealthy dwelling places to resort to intemperance in alcohol.

With these conditions existing, where we see lives being sacrificed at the altar of commercial greed, the sanitarian is forced to appreciate the great fact that sanitary science is not an independent science, but it is a part of the great political science that in the near future will be active in forcing upon the world a system of government that will be a vast blessing to our race. We know it was ignorance and lack of human sympathy that caused the contagious disease of olden times to spread unchecked over the land. So it is with the present system now being followed in this country. It is our hope that soon the day will be past and gone forever when it will be called good politics to oppose the enforcement of laws that have been passed to protect the people's health. We do not want laws that only protect the rich, for "art

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is always prostituted when it only serves the vanity of the rich," so it is with laws.

After due consideration we are forced to the conclusion that under our present system of government "adulteration of provisions has everywhere become a social institution" and we have arrived at a period in history where the people must stand by the laws of sanitary science, if health is to be considered wealth.

I feel that the people of this great State can well afford to congratulate themselves upon the fact that they have a Governor in the chair who is willing at all times to enforce laws and do all in his power for the benefit of his people. With such men at the head of the State, we need have no fear of our destiny.

DISCUSSION.

Dr. Tucker, Noblesville: This opposition to sanitation is very prevalent. We have had epidemics of diphtheria and scarlet fever. In looking for the probable causes of the spread of the disease, we began to inspect the smaller dairies within the city limits. We had an ordinance passed regulating the dairies and the sale of milk. As a result of the enforcement of that ordinance several of the small dairies, dairies in which there were only from two to four cows, were abandoned. Two of the larger dairies in the country complained to us that they could not do business under the ordinance regulating the sale of milk, and they also were abandoned. Since that the epidemic has come under our control.

Dr. Powell: I approve heartily of the motive of the paper. I notice that a number of the speakers here to-day emphasize the police aspect of the Health Officer's duty, in contradiction to the teaching part of the Health Officer's duty. Some one has said that we can post up notices and make laws, but that does not make things go; we have to after them and see that they are done. I think we need to do more and more of this teaching work. It is a thankless task, to be sure, but a great deal of our work is thankless and we may never get our reward here, unless it is in kicks and curses; but we will never get it in our own consciences.

Dr. Horne: I had the impression for several years that I was the most unpopular man in Bluffton. Not very long ago there was

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an organization formed in Bluffton and called the Federation of Labor. It is made up of laboring men. They endorsed the work of the Health Boards of the State, county and city, and also introduced a resolution against a certain official in Bluffton who believes in anti-vaccination. It is not so very long since Dr. Hurty was the most unpopular man in the State of Indiana; I know he was unpopular in Bluffton. He was considered a crank. Dr. Hurty attended a meeting that was held in Bluffton and delivered a lecture, and in the estimation of the people after that there was not a more popular man in the State. Now he is one of the most popular men in the State, at least in the estimation of the people of Bluffton and Wells County. They are not only satisfied with him as State Health Officer, but one man in the meeting suggested that he be nominated for Governor of the State of Indiana.

Dr. Shepard, Jay County: I believe the best thing for the Health Officers of the State is to keep on with the educational work they have started. I am also of the opinion that every Health Officer ought to get the physicians to co-operate with him in this work. In my home I find that the great trouble is with my constituency. They think the enactment of the Legislature at its recent assemblage is the grandest thing on earth. When you present to them your ideas of what they should do for the health and benefit of their families and the community, invariably they will call you a crank. I have been called a crank, and called it so often that I have begun to imagine I must be a crank of cranks.

Once or twice I called upon Dr. Hurty to come to my town. He has talked to my town board. Last winter we had 500 or 600 cases of measles. I think I had about 400 cases reported; the others I knew nothing about until after they were well. Some of the good citizens of my town pulled off their coats and rolled up their sleeves, went to the Superintendent of our schools and said, "Our children shall go to this school until they take the measles, scarlet fever or diphtheria, and we defy you to turn them out." I said to the teachers and superintendents. "You keep every pupil out of these schools from every family in this community that has measles, scarlet fever or diphtheria in it, and I, as Health Officer will be at your back, and I believe the State of Indiana will be at your back." I succeeded in winning the affections of

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the school board, and they worked in harmony with me, and we kept the children from families where there was contagious disease out. I frequently consulted the County Health Officer, and he said, "Go on, you are right." A little while after I saw by the Indianapolis papers that Dr. Hurty had said, "Go on; do as you have been doing in these cases, and do not regard the recent legislation."

We must call to our aid and assistance the physicians in our towns and counties, and we must gain their friendship.

SOME EXPERIENCES WITH THE RECENT SMALLPOX EPIDEMIC IN DELAWARE COUNTY,

BY H. A. SPICKERMAN.

This paper is given, not for anything new and recent concerning smallpox and its treatment, but for a brief summary of facts relative to the disease, and a desire on the writer's part to sympathize with any one present who may have been so fortunate (?) as to have indulged in the trials and tribulations concomitant with the care of smallpox.

My last acquaintance with the disease began the middle of February in a new railroad camp situated nine miles southeast of Muncie.

The personnel of this camp consisted of men from the lower class of society and from almost every state and territory.

An individual yclept George Bickmyer, had bummed his way from Cumberland, Md., through Piedmont, W. Va., starting February 1, and arriving some few days later. He stated that to his positive knowledge smallpox was prevalent in both towns and that he heard of its existence in many other places through which he passed, from tramps he met on the way.

Bickmyer was employed as a grader and continued to work uneventfully until February 12, when symptoms of variola appeared. The next day found him still at work but feeling worse. On the 14th he was unable to work at all and the following day, on arising in the morning, he noticed a slight discoloration of the skin about the forehead. He then consulted a neighboring country doctor whose diagnosis was "the grip," and who gave him medicine accordingly. By night his aching had considerably

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ceased and the fever seemed very much abated. During the succeeding three days improvement was marked as to subjective symptoms but the objective symptoms were more apparent.

On the 18th, at the earnest solicitation of his employer (who would not permit him to work, fearing the ailment was of a contagious nature), he again called upon the doctor and offered a diagnosis of smallpox.

By this time the doctor too was thinking of smallpox and sent a letter to the Board of Health, indicating his suspicions.

The sick man, however, arrived in town two days before the letter and assiduously started in quest of a Health Officer.

He stated that from the agitation displayed and lack of satisfaction given by the medical man, he concluded the best thing to do was to go to the city and find out.

On his arrival he accosted persons on the street, inquired at business houses and private residences before reaching the desired goal.

The frankness and eagerness of Bickmyer to learn his condition is not often met in such cases. Muncie then owned a small contagion hospital and here the patient found refuge in less than an hour. He experienced a typical, mild, discrete form of smallpox and an uneventful recovery. The only sequella was a secondary infection.

I now ask you why it is that any physician in Indiana, only half up-to-date, with such forewarnings as were given by our State Board a year ago, a subject before him in the pustular stage of smallpox, giving his subjective history and wanderings through infected districts, will permit the patient to scare him into the true nature of affairs and allow him to infect others?

I have known physicians who said they were not afraid of anything (the devil not excepted). But when a case of smallpox was ushered in, their much boasted fearlessness was at once supplanted by trepidation beyond all reason. And self-preservation being uppermost in their minds, their security was not felt until the affected one was a mile away or in the hands of a Health Officer.

An Irish servant girl refused to open the door when Bickmyer called at her employer's and advised him at once to consult a Health Officer.

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A German policeman passing Bickmyer on the street immediately thought of smallpox and came into my office while Bickmyer occupied the consultation room to offer his diagnosis.

Is it any wonder that contagion spreads when physicians are too sluggish to "catch on" where Irish servants and German policemen can find a hold?

Without delay fresh virus was obtained and upon its arrival in the morning Dr. Hugh A. Cowing, our efficient County Health Officer, and myself visited the said railroad camp.

Forty men, women and children were vaccinated regardless of pleas of bad blood, scrofula, eczema, syphilis, or time and number of previous vaccinations. To influence such an uncouth, hardened, heterogeneous mass was no easy task. The doctor's plan was to begin on the head boss and after getting him in line we talked to the men individually and collectively. The first martyr to display his bravery, common sense and arm, was the boss, next the subboss, then their families, and by this time it was easy sailing to get the white men. The colored required more persuasion, but after insisting that smallpox is as fatal to the negro as yellow fever is to the caucasian, they all consented.

Where ignorance is bliss 'tis folly to be wise, and it is unnecessary to say that a Health Officer is sometimes compelled to deviate from the truth and must fill his hearers full of fairy tales in order to accomplish the rational and desired end.

When visiting this camp two weeks later I found thirty-six arms to have successfully taken, or 90 per cent. Of the few which did not take, two had been successfully vaccinated during the Cuban War, one, five years before, and the last man had had the disease, virtually making 100 per cent.

I also found two men having prodromal symptoms and a newcomer in the papular stage. Of the first two, one had occupied the same bed with Bickmyer, and the other had slept in the same tent. Both of these men had sore arms but no adenalgia. The disease was greatly modified, the pustules small and widely separated, the prodromes slight and desquamation very rapid.

They were confined but fourteen days. The third man, thirty-eight years old, believed he had varicella, because, as he stated, the doctors in Mansfield, O., from whence he had come one week

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before, pronounced it "chickenpox." But after making further inquiry as to this particular kind of chickenpox, he said, "Well—it was a funny kind of chickenpox, and they put the fellers w'at ketched it in tents outside of the town and had 'em guarded." This man had never been vaccinated, experienced severe prodromal symptoms five days prior to the two others, had a semi-confluent form of the disease, was slow in desquamating and was released ten days after his companions.

I could cite many concrete examples such as the above, where individuals have been successfully vaccinated, some two to five days (and even longer) after exposure, and, if having suffered the contagion previous to the vaccination, run a mild, brief course of variola.

After experiencing such results, I can not but believe in the modification of smallpox even during the first few days of the incubation period.

I have noticed that quite a number of such persons, when vaccinated during the period of incubation, may have very sore arms, but no adenalgia.

The care of these three men was entrusted to a young fellow, named Lindsay, who had a sore arm, having been vaccinated on my first visit. Lindsay lived closely confined for four weeks with these men, cooked their food, washed their clothes, bathed them, slept in the same bunk with one, yet did not get sick. His only precaution was an ivory point.

A committee of indignant and angry farmers waited upon me and insisted that the camp and all it contained should at once be moved. I agreed that the patients should be in a County Isolation Hospital and the camp disinfected. But an isolation hospital existed only in their minds, and we were decidedly handicapped.

I mentioned vaccination as being a preventive, their only safeguard, and gave a glowing report of the thorough and good results already obtained among the illiterate members of this camp, whom we considered below the average in intelligence.

No, sir! They were "lawabidin' citizens, didn't believe in vaccination, nohow, would rather have smallpox anyway than to lose an arm and have to beg for a livin' the rest of their lives." Not one of these men was vaccinated, not a member of their families,

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not a scholar in their school, enrolling over fifty students, except one small boy that happened to be present on my previous visit and hearing the informal talk about the disease, he came up with the colored men. He registered a nice sore arm but his irate father whaled him good for "the damn foolishness," as he expressed it, and "doin' things without his consent."

Children and fools tell the truth. On February 25, a mischievous lad attending the Lincoln School in Muncie, and desiring to be relieved of school work for the day, reported to his teacher that an older sister had smallpox. A systematic investigation proved that the boy's story contained more truth than poetry. When two other physicians and myself entered the Hartley home, this boy was thoroughly frightened. He explained that it was only a ruse upon his part to get to stay at home, and to scare his teacher. He scared his teacher all right and everybody else in the building, got out of going to school and enjoyed a fifty-five days' vacation, shut up in a two-room house.

We found that this girl had chickenpox only four weeks before, and on top of her recovery had contracted varioloid. The other five children had only recently gotten over chickenpox and in due season each also had smallpox, except the boy, who, by mistake, told the truth. He was very successfully vaccinated and escaped.

A house-to-house canvass revealed two other well marked cases of smallpox.

The neighborhood, after learning the story told by young Hartley to his teacher and the subsequent diagnosis made by the physicians, believed or at least stated, that it was only a scheme of the doctors to make more money. That, if the boy hadn't told his tale in school, the Health Officers wouldn't have known anything about it and that there would be no smallpox.

There is no doubt but that Health Officers are magicians, well up in the occult and can transform chickenpox into smallpox. One man, whose wife was then in the pustular stage, told me it wasn't smallpox and that he'd prove it by not getting it himself. Said he never did take any "ketchin" disease, as it never run in his family, that he'd been exposed to every disease known, and only got typhoid fever.

This man was Henry Hale, and in several days he began to feel "fainty" as he expressed it, but thought it was due to the confine-

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ment of quarantine. He had the severest prodromal symptoms I ever witnessed, but, secretly, they were not too severe to suit me. I didn't wish Henry any bad luck, but I did wish him to have smallpox good and plenty, as he had been quite belligerent and drew a gun upon Dr. Cowing when the doctor called at his home. My wish was gratified, and Henry thought for about four days that his time had at last come.

As the prodromes disappeared the rash came on. Henry said it was only bad blood and the sulphur and cream of tartar he'd been taking brought it out. I heartily agreed that some bad blood coursed through Hale's veins, as the police docket will bear me out in my statement. The first day that Henry felt "fainty" he asked to be vaccinated and I kindly acceded to his desire. To show his gratitude he told me two weeks later, that he'd never have broken out if I hadn't vaccinated him and rubbed some of the poison in his arm.

Strange to say, this man never advanced the diagnosis of "Cuban Itch" until desquamation began. At this time intolerable itching set in and so impressed him that an attack of ague couldn't shake his belief, and he now tells his friends that he had the Cuban Itch.

Hale's temperature, for several days, hovered about 100 degrees, but Mrs. Hale said it couldn't compare to her temperature which ran up to 120 degrees and she knew as the Red Cross Doctor took it out of her mouth.

The disease in this locality was directly traceable to the grocery of Geo. Richardson. The proprietor's son had not long before been visiting in Chicago. A case of smallpox broke out in the house next door to his stopping-place. Young Richardson felt bad for the patient and went in to see him several times 'ere the ailment was diagnosed and his removal to the hospital. Richardson returned, subsequently broke out and infected the entire family. The mildness of the disease was such that no physician was called. The father merely visited the family doctor, gave the symptoms then existing, and a diagnosis of chickenpox, being careful, however, not to mention the son's visit. The old doctor sent out some medicine, but didn't go to see for himself.

About thirty cases developed from this nidus of infection. From another end of town was reported a case and upon investigation

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we found a young man named Williams, just recovering. Williams had consulted a doctor at the Russel Medical Institute, and his trouble was diagnosed, syphilis. In about three weeks he was discharged, cured. Both he and his folks lauded the doctor's ability to effect such a speedy cure with a disease that other doctors required eighteen to twenty-four months to cure. But lo and behold! Williams' father had a touch of the same thing, only milder. (He had been vaccinated forty years ago.) Then his brother-in-law and sister broke out. The brother-in-law became very much excited when his wife broke out and swore up and down that both he and his wife were virtuous. His suspicions being thus aroused, another doctor (a reputable one this time) was consulted with the result that the true nature of the malady became known. My last case probably gave me more notoriety than anything I have yet encountered. I am now accused by residents of Shedtown of planning a putup job to get my name in the Chicago American.

I was just on the verge of congratulating myself upon the speedy wiping out of the disease and had only finished cleaning up my last case (supposedly) about fifteen minutes, when word came to investigate the family of Wm. Marlowe. On making known my errand I was permitted to enter the Marlowe home by the father. To cut a long story short, I remained a captive one hour and a half which seemed to me pretty long. The infurated man after locking the doors, pocketing the keys, drew out a knife, and opposed my exit. I don't know the exact measurement of that knife, but under the existing conditions it was the largest knife I ever saw carried. The angry wife armed herself with a long metal spoon which she occasionally brandished over my head. Amid such turmoil and confusion I was offered ten dollars for every pock I could find on Marlowe's daughter, whose eruption was then becoming pustular. At that time a six-shooter would have been more of an object to me than ten dollar bills. If I had accepted the generous offer I might now be a millionaire, but being poor in mathematics while at college, I hadn't the heart to display my ignorance by counting.

The parents insisted that the little girl was broken out with vaccination which had "gone in." Their doctor told them it

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would do this as she had scrofula. Her arm showed two spots which had evidently been prepared for virus but neither had taken. Two months later I learned that after vaccinating, the doctor applied a strong solution of carbolic acid to kill the virus. I was given to understand that no member of the family would be vaccinated save over the lifeless body of the infuriated father. This was altogether too novel a way to suit me, so I didn't insist. I was informed that a buggy, which I had purchased six months before, was the recompense I received from the Board of Health for telling people they had smallpox when they didn't. That I possessed only one suit before smallpox appeared, and many other rich accusations which hurt my feelings and impressed my guilty conscience. Every doctor in the city, except their physician, was a scapegoat or drunkard and had plenty of money. If any one present knows of a brother in distress, please send him to Muncie to enrich his coffer, providing he has the courage to practice among such an inferior, immoral set of professional brothers.

The son, wife and husband had the disease in the order named, yet were not "aseptically" vaccinated as the little girl was. This man through obstinacy cost the city $246 and much trouble. Whenever it becomes necessary, we treat smallpox in Delaware County by the shotgun method. Marlowe, after being given explicit directions and told to stay in, took it upon himself to go to the factory and work. When our worthy mayor was informed of the escapade he hastened three stalwart policemen to escort Mr. Marlowe to his home in the Black Maria. Force and arms make good citizens out of some men as in this instance, when our fractious charge became meek and lamb-like, and the spell lasted for forty-one days. A few of our most troublesome charges only come to their senses when brought into court and fined. It helps to pay their expenses while quarantined, makes a good impression upon the sympathizers of the guilty, and avoids much future trouble. A few of the arguments put forth in our county as to why the disease is not smallpox, are: That every one attacked was not pitted, was not quarantined sixty days, was not bed ridden for weeks; that every one exposed was not infected; that those physicians who did not see and possibly never have seen a case, said it wasn't smallpox; that no one succumbed. I must

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say it is a pity that the deaths from variola have not been evenly distributed or at least where most needed to convince the doubting laity.

One family that had been visited by four physicians well versed in diagnosis and agreeing upon the nature of the disease in question, was not convinced until an old soldier came along who had smallpox in '61, and viewing one of the patients through an open widow twenty feet away, pronounced it "the real thing."

Conceit, maliciousness and ignorance cost the State of Indiana more money than all its smallpox. Just as long as the anti-vaccinationists persist in beliefs contrary to actual fact and applied science, and have their following legislate laws reeking with stupidity, just so long may we expect to indulge in this contagion.

Will the time ever come when a Health Officer may approach the evening of life unembittered by experience and able to contemplate the past with serenity, the present with tolerance, and the future with resignation?

May 27, 1901.

DISCUSSION.

Dr. Hunston: In a recent number of American Medicine, the editor, commenting upon the number of cases in the United States, intimates that it is the Health Officers and not the physicians who are to blame for the spread of the disease. From my experience I am inclined to believe it is the profession at large, and not the Health Officers who are to blame. I will cite an instance which illustrates this: A young man came home from Dakota where the disease was prevalent, and his case was not recognized as smallpox. The rest of the family took it, and their cases were not recognized as smallpox. Other cases appeared in the neighborhood and were diagnosed as grippe. One case appeared in the hotel there, and it was not recognized as smallpox, a great many cases resulted from that. When the disease was finally recognized and they began to quarantine, there were forty cases. In vaccinating for the disease, where the vaccination preceded the taking of the disease it proved a preventive, but where I vaccinated them after the patient to whom they had been exposed was in the pustular stage it did not prevent them from taking the disease, but the cases were mild.

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Dr. Hunter, Lawrence County: I sympathize with the gentleman who read the paper. I shall give my experience with vaccination. I am a little peculiar about that. People ask me about vaccination and I tell them that if they are sure the smallpox would not be more severe than the cases we have had in Lawrence County, take the smallpox and be immune for life. The vaccination will run out, and you will have to be vaccinated again after a certain lapse of time. We have been using Mulford virus. In some of the light cases of smallpox I think I would prefer to run the risk of having the disease, instead of having the very sore arms we have had from the use of Mulford's virus. Park Davis' virus has been a failure where we have used it. I would favor extending the quarantine from fourteen to twenty-one days.

We have had some trouble about disinfecting. Some of the people wanted to do the disinfecting themselves. I got the consent of the County Commissioners to appoint a man to go and disinfect the houses, but we have no law to enforce his services upon the people, and when they wanted to do the work themselves we had to let them do it.

Dr. Gammel: A young man came from Dakota to visit in the town in which I live. After a few days he was taken sick. The attending physician diagnosed his case as smallpox. On the day the physician pronounced his disease smallpox, there had been seventeen persons visiting the patient. Those people were all quarantined and vaccinated, and the house in which the young man was staying was quarantined. The father and mother in this family had been vaccinated, but the children had not. The seven children had the smallpox. After that we had no trouble in getting the people to consent to be vaccinated, or in enforcing the quarantine.

Dr. Powell: I think we should discuss some of the reasons why vaccination is not successful. Last year we had one epidemic of fifteen cases of smallpox. I vaccinated probably 500 people altogether, and I found a great many cases where the vaccine did not take. I used Mulford's virus entirely, and had some very sore arms, but no serious results. I vaccinate the people at the county infirmary, and shall continue to do so regardless of protest. They talked about bad blood and syphilis and such things, but

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I can not see that it made any difference, for they got along as well as any one else.

Dr. Hunston: I had a case a few years ago, and when the patient had recovered I disinfected the house and burned the clothing and everything that was in the patient's room. After that we went to the County Commissioners to get them to pay the bill for the burned goods. They would not pay it, and I paid the bill, which, by the way, was ten dollars more than my year's salary.

Dr. Smith, Kokomo: We have had about twenty-two cases in Howard County. The first case was that of a young man who had just returned from Oklahoma. He came to Greentown and visited the doctor's office to find out what was the matter with him, as he was not feeling well. The doctor made up his mind immediately that he had smallpox and called in two other physicians, who both diagnosed the disease as sallpox. I wanted to quarantine the family of the young man, but the citizens objected; they wanted to go in and out, and asked me to diagnose the case as something else. This I refused to do, and the objection to my diagnosis of the case became so strong that they made up a purse and sent for Dr. Powell, of Marion, who came over and told them it was smallpox. Afterwards they had Dr. Hurty there, and his decision was the same as ours. The young man was in the pustular stage when he visited the physician's office. While in town he went into nearly every store in town, and shook hands with a great many people. The night before he had staid at a livery stable in Greentown, and two young men staid there with him. His own family and the families of the two young men who staid with him at the livery stable were the only ones who took the disease, except the proprietor of the feed store where he had called. When Dr. Hurty was there I invited the people to come and hear him. After he had talked to them they had different opinions about some things, and one of the physicians, who had opposed Dr. Hurty's diagnosis of the case, afterwards came to my office and apologized for it.

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QUESTION BOX.

Do we have to have a burial permit for bodies shipped into the State?

Dr. Hurty: The law says that no human remains shall be buried in Indiana without a permit. Therefore I think we must have a permit to inter remains shipped into the State. But the law does not say that we must have a record, because the death occurred out of the State. The Health Officers should, therefore, without hesitation, issue a burial permit upon the strength of the shipping permit.

Can a member of a Health Board of a city be removed from office by the State Health Board for refusing to report contagious diseases or births in his practice?

Dr. Hurty: The law is very plain; it says "Yes."

Dr. Powell: He is liable the same as any other physician. It is a matter outside the Board of Health entirely; he is simply a physician who has failed to report.

Dr Fairfield: The Mayor of a city is President of the Board of Health. The State Board of Health could not remove him from his office if he was a physician who failed to report.

What are the duties of a Secretary of a Board of Health, besides gathering statistics?

Dr. Hurty: To enforce the health laws; to enforce the rules of the State Board of Health, and to enforce the rules and orders passed by his own board.

If a county seat fails or refuses to elect a Secretary of a Board of Health, under Section 8, and the County Secretary performs the duty as Secretary of the City Board, to prevent a break in the records of the county, is he entitled to pay, as provided under Section 8, for such service?

Dr. Powell: I should think that was a question to submit to an attorney. I think if the man has not been legally appointed he could not collect for his services.

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Dr. Smith, Howard County: I think the constitution settles that question, because it says no citizen shall hold two offices of trust.

How can we enforce vaccination upon those exposed to small-pox, when they refuse to be vaccinated?

Dr. Fairfield: We can not enforce it.

If a Board of Health is created by a city ordinance, and the ordinance is repealed, does that repeal remove the Secretary?

Dr. Powell: We had a town in our county that resolved that they didn't need a Health Officer any longer, and voted the man out of office and the office out of existence. The statute says that every county and corporate city or town must appoint a Health Officer, and if they fail to do it they lay themselves liable.

Dr. Shepard: The city of Dunkirk once elected a Board of Health, and had Dr. Murray appointed as its Secretary. Some time ago they repealed the city ordinance. Dr. Murray wants to know what he is going to do with himself.

Dr. Rose: He wrote to me about it, and I told him to go ahead and do his duty.

Will Dr. Hurty explain why glycernated vaccine deteriorates?

Dr. Hurty: The vaccine lymph, when taken from the animal, contains pyogenic organisms. How will we get rid of them? When you mix it with about 20 per cent. glycerine and place in cold storage said organisms disappear but the lymph retains its vaccine power. It is put into capilary tubes, when, by bacteriological process it is found the organisms have disappeared. From that time the lymph deteriorates, and gradually losses its power to produce vaccinia. It is known that if glycernated lymph is allowed to get to the temperature of eighty degrees and stay there for any length of time, say from three to six hours, it will lose its power to produce compox. In being transported it may be placed against a radiator or near a stove, and will then lose its strength. That has happened. Then druggists keep it badly sometimes. In one town I saw a lot of the little wooden cases in which vaccine is packed lying in the front window of a drug store with the sun

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shining directly upon them. I asked the druggist why he did that, and he said so it would sell. I told him it was probably ruined. We placed a thermometer in the window and found a temperature of eighty-five degrees. I took some of the tubes and tested them, and found the stuff was worthless. The manufacturers of lymph places a date on the package. After the expiration of that date it is not to be used. When the lymph leaves such propagating establishments as Park-Davis', Mulford's or any of the standard makers it is all right. All would be surprised and gratified to see how careful and particular they are in putting it up. I went to the Mulford establishment and introduced myself as a doctor from Indiana. They showed me about the place. There was no reason to suspect any special preparation, but everything was going on with the most perfect exactness and cleanliness. Every care that it was possible to take was being taken. I found the same condition prevailing at Park-Davis'. If any virus so carefully prepared and treated produces bad arms, I do not believe the pyogenic organisms that produce the necrosis are to be found in the vaccine. Not infrequently the organisms are found in the epidermis itself.

Can a corpse be taken from Indiana and buried in another State without a permit from Indiana officers? The corpse in question was taken in a wagon, and the undertaker lived in Ohio.

Dr. Hurty: An undertaker from another State has come into Indiana and taken a body and gone out with it. We can not do anything after he is out of the State; he is not then under our jurisdiction. But if he returns to Indiana at any time you can swear out a warrant, put it in the hands of a Justice of the Peace, and he may be arrested and punished.

Should a County Health Officer appoint an undertaker a deputy in a town where the Town Council has elected a physician to the office of Health Officer?

Dr. Hurty: I think this question refers to a case at Oxford, Ohio, or at College Corners, where the undertaker lived in Ohio and was employed by Indiana people. Dr. Fosdick, of Union County, appointed an undertaker as deputy to induce him to obey

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the Indiana law which up to that time he had refused to do. He did not do his full duty after he was appointed a deputy, because he was not a conscientious man.

In case of an interment of a corpse dead of a contagious disease without the proper permit, should the County Coroner exhume the remains as in other cases?

Dr. Hurty: The law is very plain. It says if there is an interment of a body without a burial permit the Coroner shall have it disinterred and hold an inquest over it. I don't see how the Coroner can escape.

Adjournment.

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THIRD SESSION.

The Third Session was called to order at 8 p. m., May 27.

Charles Carrol Brown led the discussion on "Sewage Disposal and Water Supplies."

Mr. Brown: I would like to speak of one or two things which have arisen in my experience of sewage disposal and the purification of sewage and the pollution of streams, that may give rise to some discussion. As I understand it, that is the purpose of my being here to-night. We have had a great many conflicting decisions recently about the matter of the pollution of streams, and they have been on all sides of the question. In New Jersey we have had decisions on both sides; in Indiana we have had one or two decisions which most of us think are on the wrong side, and in Wisconsin we have had decisions which we think on the right side. Most of the decisions have been on a partial aspect of the question. The decision was intended to cover a special case, not one similar to the ordinary run of those cases. I think that is true of at least two of the New Jersey decisions which have given us some trouble. There is one decision in which the judge has gone into the consideration of the matter so carefully that I want to read to you the part of it which discusses the principles on which the decision should be made. This is from one of the Wisconsin decisions:

Pollution of Streams by Sewage Flow.

The Supreme Court of Wisconsin has affirmed the decision of a lower court enjoining the city of Waukesha from discharging unpurified sewage into a stream and granting a jury trial to determine damages for injury already sustained. The statement by Judge Dodge of the grounds on which the decision is based is the clearest statement of them which has yet been made. It is as follows:

"We can not but recognize that as the density of our population increases, as our citizens engage in new and greater industries, and as the municipal aggregations of population multiply and expand, the original purity of streams and water basins can not be wholly preserved. They are the natural and unavoidable courses and receptacles of drainage, through and into which must flow the refuse of human habitation and industry. How far these changing conditions must bring about a yielding of the private rights of continued purity of those lakes and streams to the necessity

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of use thereof for the public and general health and convenience, and upon what terms such yielding shall come, are primarily questions of policy for the Legislature, within the limits of its power over private rights defined by the constitution. When, if ever, the Legislature shall enact that streams generally or any streams shall be used as sewers without liability to the owners of the soil through which they run, the question of constitutional protection to private rights may be forced upon the courts for decision. Until such enactment is made, however, in clear and unambiguous terms, we shall be slow to hold by inference or application that it has been made at all. The right of the riparian owner to the natural flow of water substantially unimpaired in volume and purity is one of great value and which the law nowhere has more persistently recognized and jealously protected than in Wisconsin. Not alone the strictly private right, but important public interests would be seriously jeopardized by promiscuous pollution of our streams and lakes.

"Amid this conflict of important rights, we can not believe that the Legislature concealed, in words merely authorizing municipalities to raise and expend money for the construction of sewers, a declaration of policy that each municipality might in its discretion, without liability to individuals, take practical possession of the nearest stream as a vehicle for the transportation of its sewage in crude and deleterious condition. The authority granted to municipalities is to construct sewers, but subject to the general legal restrictions resting upon such corporations forbidding invasion of private rights by the creation of nuisance or otherwise. This view of the legislative purpose is enforced by the consideration that although liquid sewage must flow off along the general drainage courses of the vicinity, it is by no means physically necessary that it should carry with it the solids in an offensive or unhygienic condition."

That, it seems to me, puts the case on scientific grounds, and grounds which can be thoroughly well established and taken care of. The question which arises is as to the effect of this sewage discharge upon the stream into which it is discharged. That is a question which it takes a good deal of experience and a good deal of examination of actual cases to be able to make any sort of guess beforehand as to what will happen. I might give a few examples of which I have come across in my own practice as to the differences in the action of streams upon the sewage which is discharged into them, or, perhaps better the action of the sewage which is discharged upon the streams.

One is the case of a small stream, which was large enough, a fair share of the year, to run a mill, and on which there was at least one dam below the sewers of the city of Middletown, N. Y. The amount of sewage was too great for the stream to take care of, and it very soon produced a serious nuisance below the city.

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It was most serious in the stream below the dam. The amount of water in the dam was not very great, but the amount of sewage was more than could be taken care of. From immediately below the dam until this creek opened into the river, some three or four miles below, there was considerable nuisance. There was odor for a considerable part of the time, and the physical condition and the looks were very bad indeed. We were called upon as the State Board of Health to examine it. We condemned this method of the disposal of the sewage of the town because of the serious nuisance which it produced. The effect of this sewage was shown for at least five miles below the outlet of the sewers. The stream was becoming gradually worse throughout the whole length of its flow until it reached the river. When there was a considerable increase in the flow after a heavy rain storm or a long continued rain it was cleaned out to some extent, but that was not sufficient to keep it clean for any length of time. In that case the sewage could not be permitted to enter the stream.

Now, to take two cases which are quite similar, and in which the amount of sewage which flowed into the stream was not too great for the stream to take care of. I want to show by comparing the two cases, what the difference is in the action of a stream by the difference of the way in which it flows. These two cases are of Amsterdam and Schenectady, N. Y., which are located on the Mohawk River, within twenty miles of each other. There is hardly any water entering the river between the two cities. The two cities are about the same size and have about the same service by sewers. The conditions are about the same, except as to the method of flow. Between Amsterdam and Schenectady the river flows quite rapidly over a series of rapids and through a series of pools. In the pools the current is quite rapid, so there is practically no opportunity for sedimentation at any point in the course of the stream from Amsterdam to Schenectady. We took a series of samples of the water at intervals of from two to four miles all the way from Amsterdam to Schenectady. We took a series of them in the winter time and another series in the summer time. We analyzed these samples chemically, and we also had a bacteriological analysis of them made. We found evidences of the sewage in the stream all the distance from Amsterdam to Schenec-

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tady. There was some improvement as the stream flowed, but after we had gone five or six miles the improvement was very slight. We found very near as many bacteria in the water at Schenectady as half way between the two cities, and we found, by very careful analysis, that the pollution was nearly the same. We tested some of the water for the number of bacillus coli communi which were in it, and we found quite prominent evidences of the presence of this germ at Schenectady. We thought we could determine quite readily the number of bacillus coli communi which were in the water at that place. There was no place for them to come from except Amsterdam.

At a point about three miles below Schenectady there was the old State dam, and the sewers of the city of Schenectady discharged in the pond formed by that dam. The water at the point of discharge is perhaps twenty feet deep. The stream at that point runs through a rather soft bed, and the flow of the stream, during high water, is so strong that it digs out the bottom to that depth, and keeps it very generally at that depth during the year. At the dam there is a ledge of rock which comes to the surface, and the dam is located on that ledge, so that for the last three-fourths of a mile above the dam the water is quite shallow. We took cross sections opposite the sewer and at two points below the sewer in the dam, and tried to find out whether it settled or clung to the same bank as discharged. In fact, we did everything we could think of. We found that the sewage practically disappeared, so far as the effect on the water was concerned, before it reached the dam. There was some effect shown still at the dam, but very little, hardly any more three miles below the city of Schenectady than there was eight or nine miles below the city of Amsterdam. Below the dam the river runs over the ledge of rock at a very rapid rate, and is spread out very wide and shallow. It runs that way for six or eight miles, when it reaches the intake of the West Troy waterworks, and that runs over a ledge of the same sort until it reaches the dam at Cohoes, where the city of Cohoes gets its water supply. By the time we reached the West Troy waterworks intake the effects of the sewage had entirely disappeared. This is nine miles below Schenectady. The number of bacteria was very small, the number of bacillus coli communi was practically nothing, and the chemical analysis was very satisfactory indeed.

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I give this as an illustration of the way in which an amount of sewage which is not too great for a stream will affect it. In neither case would it be necessary to purify the sewage for any effect it has upon the stream itself, unless you are going to use it for a water supply. If the sewage at Amsterdam would have to be purified to protect the water supply at Schenectady, apparently it would be necessary to purify the sewage of Schenectady to make the water supply of West Troy all right.

I will quote a case to show the difference of the effect of sewage in the water. This case is reported by Professor Mason in his book on water supply. There are one or two corrections I want to make. The city of Schenectady originally drew its water supply from wells in the city, and it became a hot-bed of typhoid fever. The wells were shallow, and they had cesspools and no cisterns or sewers. They put in sewers and changed the water supply to the river, and the typhoid fever decreased, in fact, almost disappeared. One year an epidemic of typhoid fever appeared. The water in the river was muddy, and the people did not like to drink it. They went back to their wells, and the epidemic of typhoid fever was the result. The first case below occurred in West Troy, the first intake down the river from Schenectady. West Troy is below Cohoes, but the typhoid fever occurred there first. Afterwards it occurred in Cohoes.

The city of Albany takes its water supply from the Hudson River below West Troy and Cohoes. Green Island is below West Troy, but Green Island did not have the epidemic. It isn't safe to assume that because under certain conditions the effects of the sewage upon the stream is zero, under certain other conditions it is also zero. This case has not been definitely traced out in all its details; we have not made all the examinations which would indicate the reason for this epidemic of typhoid fever in these different towns; but it seems fair to draw the inference that the conditions of the stream in winter time—which was the season in which this epidemic occurred—under the ice and snow, were such that the disease germs could be carried for that distance and produce a serious effect upon the health of the cities below.

The next question is as to what can be done to the sewage to make it safe to discharge into the stream. We have made a great many experiments in the past on this line, and have had all sorts

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of results. None of them have been satisfactory, because none of them have gotten rid of the whole of the nuisance. When we tried the chemical precipitation we got rid of the solids to a certain extent, but we had still left in the discharge a certain amount of organic matter which was in a state in which it was subject to further putrefaction. The same has been true of most other experiments in which we have tried to discharge the effluent from the purification works into the stream. The most modern method, and one which seems to promise the most, is the so-called septic method, which in its entirety consists of a septic tank and one or two or three filters. The principle upon which this septic operation depends is that there are two classes of bacteria which operate to destroy the organic matter in the sewage and turn it into inoffensive and inorganic matter, those bacteria, which require oxygen for their action and those which require no oxygen, which, in fact, for their work without oxygen in the septic tank. In the septic tank we have excluded the oxygen so that the anarobic bacteria get in their work in the tank. We have a comparatively small amount of sludge left in the tank, and a reasonable amount of the organic matter removed from the sewage. The amount is practically the same, perhaps in the best examples it is more than removed by the chemical method, and the amount of sludge is materially less, because we have no lime added to increase the sludge, and the amount of organic matter in the sewage is properly destroyed. If properly taken care of the organic matter from the septic tank is not ordinarily subject to additional putrefaction in the stream itself. So far as any ordinary case of nuisance the septic tank may be sufficient. But it does not get rid of the bacteria as a whole; it leaves plenty of food for some of them, and it does not get rid of all of the disease germs.

I will describe the tank at Champaign, Ill. The tank is a rectangular box in which the sewage stands perhaps six feet deep. The sewage flows in at the upper end into a small chamber at that end, so that its velocity is stopped entirely. It wells up in that chamber and overflows by a lip the entire width of the tank, and flows into the tank at a uniform, slow rate. That rate, of course, depends upon the amount of sewage flowing in the sewer

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and the width of the tank. The tank is perhaps twice as long as it is broad, and in the distance through the length of the tank we find baffle plates located, one in the bottom, which causes the sewage to rise and flow over it, and then one in the top which keeps it from flowing over the surface of the tank, so that the tendency is for the sewage to flow up and down, first over a baffle plate and then under one, until it gets to the other end. That prevents currents forming on the surface or near the bottom. If the currents do form they carry off the scum which forms on the surface, or disturbs it, or disturbs the light sludge as it settles to the bottom. Then at the lower end of the tank the water overflows at a lip similar to the one at the upper end and drops down in a little waterfall in a channel which extends the entire length of the tank.

The sewage which flows into the tank is straight from the sewer. It should not be too stale. The water as it runs over the lip at the lower end of the tank is quite clear, and there is very little floating matter in it. You can see a little; it is slightly milky. The amount of matter which is in the water depends upon the rate at which it has flowed through the tank, and on several other conditions which I need not go into. The effluent runs through a vitrified pipe about fifty feet into a small stream. In the summer time the stream is perhaps not larger than the stream of sewage that flows into it. There is no complaint about the stream below.

The tank may be covered or may not. In this climate it is better to cover it. The original idea was that these anarobic bacteria were injured by the action of the sun, and that the tank must therefore be covered to keep the light from the tank. But it has been found by experience that the scum which forms on the surface, which is in some instances six inches thick, is sufficient to cut off any light which may be objectionable, and that the tank operates in the warm weather as well without a cover as with it.

The residual matter is practically all destroyed by bacteria. There is a certain amount of inorganic matter, sand and such matter, which is washed off the streets and gets into the tank. The heavier parts are kept in the channel at the upper end of the tank. There is a certain amount which is light enough to go

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over and settle in the bottom of the tank. It is necessary to clean it out occasionally, perhaps twice a year. The tank needs to be proportioned to the amount of inflow, to the strength of the sewage and to its age. The flow of sewage in the sewer varies 50 per cent. say, in a day, without taking into account the storm water. There is, of course, a difference of something like 50 per cent. in the rate of flow in the sewage in the tank in the course of a day, but that does not seriously affect the effluent.

Now, the question is, will this septic tank discharge be sufficiently purified to allow it to go into the stream, whether it is to be used for water supply or not? That has not yet been decided, because we have not had sufficient experience to determine it. The Local Government Board of England is very strict upon that point. They say that the effluent from a septic tank is not sufficiently purified to go into a stream. At Manchester the septic tank discharges its effluent into the Manchester Canal, and from that into the sea; but they are obliged to run it over the contact beds before discharging it into the canal. The storm water is also run through one filter before it is allowed to go into the canal. Of course, that canal has been a very serious nuisance since it was constructed, although the Manchester people have tried their best to purify it, using the best methods obtainable. Where there is a set of two contact beds, the first is a tank very much like the septic tank filled with coke broken to a size of two to two and a half inches. Those are filled with effluent from the septic tanks in several different ways. The Manchester way, I believe, is to fill the tank full, then shut off the inflow, turn it on to another bed, allow the sewage to stand in this contact bed for a short time and then draw it off. The effluent is considerably purified. The principle on which this effluent is purified seems to be that the bacteria, which do require oxygen, get in their work on the organic matter in his bed. The coke is very porous, and the bed is still more porous, so a large amount of oxygen is contained in the bed. Then the sewage flows in and the bacteria in the coke—which, by the way, are not there at the beginning, but have to be fed in by the sewage or some other way—take hold of the organic matter in the sewage and act upon it. It is possible that most of this action takes place as the sewage is going out. The bed is allowed to

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rest three or four hours after the sewage is run out. The bacteria get in the work after the sewage is run out, from the fact that the organic matter is deposited on the coke in the form of a slime which is left, and the bacteria seem to act upon that slime and decompose it. When the next lot of sewage is let in the slime is carried out. The second bed through which they are compelled to run this sewage is filled with much finer coke. This coke is not much coarser than gravel. This gives a considerably larger number of surfaces for the organic matter to be attracted by. Of course, the sewage which runs onto this second contact bed is much purer than before, so the amount of organic matter which is to be attracted is much less and more finely divided. This fine contact bed seems to do it, and the effluent from it is, as a rule, very satisfactory indeed. I think the Local Government Board at Manchester has for a good many years had a hobby of land filtration, and they do not like to give it up, so they have added the requirement that if to determine the effluent from the second contact bed is not sufficiently pure, the city of Manchester must be ready to run it over an area of land which they already have, and which they have been using in their attempts to purify by other methods.

It seems to me that this method has more promise in it than any of the others.

DISCUSSION.

What is the probable cost of a septic tank for a city of 3,000 or 4,000 inhabitants?

Mr. Brown: The cost of the septic tank at Champaign, including the roof, which I would advise in this climate, was about $2,500 to $2,800. The cost of taking care of it does not amount to $50 dollars a year. There are probably from 8,000 to 10,000 people in Champaign.

Dr. Taylor: You speak of sewage becoming stale. Under what circumstances does it become stale?

Mr. Brown: If it flows for a long distance through a sewer the septic action will take place in the sewer itself, to some extent, and the oxygen will be almost entirely removed from the sewage.

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If the sewage stands too long before it gets into the tank it does not have as satisfactory an action. If it takes too long a time to flow through the tank itself the same thing occurs.

Dr. Hurty: I understand that the septic tank you speak of is built in the ground.

Mr. Brown: It is a tight tank which usually is most conveniently constructed in an excavation in the ground. The first chamber in the tank is very small. It is simply meant to stop the flow of water and to let it into the tank at a very slow rate. The most of the sediment dropped there is the sand and heavy matter of that sort, which can be dug out with a spade without interfering with the flow of the sewage.

Dr. Hurty: The purifying bacteria destroy all the pathogenic organisms. While the sewage may contain typhoid infection, as it flows out in the other end of the tank, it may be rich in bacteria, but contain no intestinal bacteria.

Mr. Brown: I think that is true, but it has not been proved yet.

Dr. Hurty: At Brockton, Mass., I examined their system of purification, which is through gravel beds. They had fifteen beds, containing about three-fourths of an acre each, laid out like a checker-board. They had a dyke around them. They had been scooped out and then underdrained and filled with gravel, and there they pumped their sewage. The lay of the land was such that they could not have it flow. After sewage has been pumped on bed No. 1, they do not use it again for several days. The next day they use No. 2, the next day No. 3, and so on. The under drains leading from this acre of ground emptied into a stream about half a mile from there. The water which ran from the tile into the stream was cold and clear. There was a bright tin cup there, and Mr. Snow, the engineer who was with us, drank off a pint of this filtered sewage. Dr. Ferguson, of this city, who was with us, and I also drank some of the water. At the laboratory we found it was free from intestinal bacteria. Mr. Snow told us it was difficult to get such a high degree of purification, and that the beds had to be run slowly to do it. He said any

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municipality could multiply those beds and take care of any amount of sewage. He said the beds were raging furnaces, where bacteria bring the oxygen of the air in contact with effete matter, burning it up.

In London, Canada, at the Ontario Insane Hospital, they had laid off ten acres of ground and underdrained it, just as a farmer in Indiana lays tile drains, only about twice as much tile was used there as for ordinary draining. All their sewage was led on to this area, and the ground was planted in corn, tomatoes, beans, peas, in fact, all kinds of top crops. They got rid of every bit of their sewage that way, and they were surprised to find that little or no water ran out of the underdrains, so they had one of the acres dug up and found that it was really unnecessary to have drains there in that particular soil. They afterwards ran an acre there by the irrigating process without any drains at all. The land took care of it and there was no odor at all.

In a little park in Philadelphia I saw the works that were put in by Colonel Waring. Those were coke beds, four of them, built in the ground. Just beside them was a pump-house with a big steam engine. The sewage would run on one of those beds and run over them. This strained out all the coarser part of it. In the meantime the engine was blowing air up through the other beds. They had underground pipes and machinery to blow air up through the beds. That is called an areating bed. There was sewage running in a good big stream from that park and the small settlement around it. It amounted to taking care of the sewage of a town of 10,000 or 15,000 people. This place was entirely free from odor, and the water that ran out underneath they caught and used for sprinkling. They sprinkled the walks and the grass and the flowers with it, and I never saw such luxuriant vegetation as there was in that park; it was really tropical in its appearance. Why would not that be a good process to use in a town, say the size of Crawfordsville, in this State? Or, why would not a septic tank and a couple of contact beds be a good way to dispose of the sewage? I think if Crawfordsville or any other town in this State would do that it would be to its credit. Mr. Brown has made plain that it will not do to put sewage in a stream unless you want to breed disease. I think Indianapolis

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is the most abominable place on earth for this pollution of streams. If you want to smell something awfully repulsive start in below the mouth of our sewer and go down White River. It is nothing but a noisome open sewer all the way, and seems to be getting worse and worse. For a distance of ten miles down it is simply horrible. You can get samples of water as far south as Southport in which there is intestinal bacteria. We caught fish as far south as Gosport which we sent to Washington to be examined by Dr. Salmon, and sent back the report, without knowing anything about where they were caught, that they were from water overloaded with sewage. Now, in the face of this, our Supreme Court has decided that all cities have a right to empty their sewage into streams. In his last message the late Governor Mount said the time was here when the State Legislature would have to pay very close attention to this matter of emptying sewage into streams.

Dr. Brown: It seems that the Indiana courts have decided without reference to the Legislature or any one else that we can use the streams for sewers, and that any one has a right to use them. The courts in New Jersey have decided that the Legislature has the right to determine whether the streams shall be used as sewers or not. This Wisconsin decision seems to say that the Legislature has a right to determine whether the streams shall be used as sewers or not, provided it does not interfere with the rights of any individual. That is a decision which has common sense behind it, and which will finally have the law behind it, and the decisions of Indiana and New Jersey have to be brought up to it.

On motion of Dr. Davis, of Richmond, a vote of thanks was extended to Mr. Brown for his address.

Adjournment.

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FOURTH SESSION.

The Fourth Session was called to order at 9:30 a. m., May 28; Dr. Davis, of Richmond, in the chair.

Dr. Pritchard, Vanderburgh: It seems that there was an organization formed here yesterday about which some of us are in doubt. We do not understand thoroughly the nature of the organization or the objects of it. I would like to know what the object of the organization is, and whether it will have any effect whatever upon the present organization.

Dr. Hurty: All I know of the matter is what occurred before all of you. Dr. Forrest in his address suggested that the time had come when the Indiana Conference of Health Officers would probably do better and be more flourishing if it assumed an independent existence, rather than to meet under the auspices of the State Board. He suggested that this conference be organized as an independent body; that we each year elect our President and other officers, and keep up an organization as is usual in such cases. As you know, that was proposed and was brought forward in due form, committees were appointed, and it was endorsed by the association. The question was, Would that be better than the present condition? It seems the association thought it was, for they voted for it.

Dr. Pritchard: It seems to me that in the organization we have, we, as Health Officers of the State, are subordinate to the State Health Board and are subject to the State officers. We represent in the State between 600 and 700 Health Officers. It is my idea the coming municipal year to try and get an appropriation in so that subordinate officers could attend these meetings and get the advantage of them. They serve without pay, and if we tax them one dollar a year, with the privilege of taxing them five dollars, you will not get them in.

I move you that we reconsider and rescind the action of yesterday afternoon in regard to the new organization.

The motion to reconsider and rescind was seconded.

Dr. Taylor: When I was connected with the State Board of Health this same question came up. At that time it was decided

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that the better policy would be to keep up the organization under the supervision of the State Board of Health. In my town, and I have no doubt it is the same in many others, a statement is made to the City Board of Health that the State Board of Health has called a conference of the Health Officers of the State, and that it is desired that a delegate be appointed to that conference for the purpose of effecting a thorough organization and instructing Health Officers on their duties and procuring a united effort on the part of all Health Officers. They will usually make an appropriation for this purpose if the matter is presented to them in this form. I am very sure, however, that if I should make the announcement that the Health Officers are called to a conference in Indianapolis simply on the authority of the officers of the organization they would not bear the expense. When the conference is called by the authority of the State Board of Health, they will pay the expense of the delegate. When I first heard of this I thought it was an organization outside of the old one, and that it did not abolish the old conference.

Dr. Bence: We did not hear very plainly what was read in Dr. Forrest's address, and sat still and let this thing go through. It was ill-advised, immature and very little considered. I have heard the members say since that they did not intend to join the society. We are only Health Officers, and our tenure of office is uncertain; the men who are here this year may not all be here next. There will be new men here. Instead of our getting up a new organization, I think this association we now have can be improved very materially. Instead of the members getting up here and reading papers, I would like to see men of national reputation, specialists in every department, come here with a matured paper, a paper that will teach us. If necessary, let us pay our dollar into a fund to get these men here to instruct us. I did not vote on the matter at all yesterday, because I was not well enough informed to vote. I think the State Health Board ought to make their request a little more mandatory and get more of the Health Officers of the State to come to the conferences.

Dr. Smith: I thought yesterday I understood the motion, and voted against it. I am heartily opposed to it. I think it is the

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duty of the conference to vote it down. We do not want to go outside the jurisdiction of the State Board of Health.

Dr. Pritchard: I would include in the motion that each member who has paid a dollar have it refunded to him.

The motion to reconsider and rescind the action taken on Monday was carried.

Dr. A. W. Bitting, Lafayette, addressed the conference on

NEED OF DAIRY AND MILK INSPECTION IN TOWNS AND CITIES.

Dr. Bitting: I shall not speak at great length on the subject, but shall relate what can be accomplished and what is being accomplished in a small way, but still effectively, in the city of Lafayette. Lafayette is probably representative of the smaller cities. It has about 20,000 inhabitants, and there are sixty-nine dairies, and in those dairies there are 474 cows. These dairies are, under the usual conditions as found in the State, good, bad and indifferent—mostly indifferent and bad. These dairies are located from within the city limits to eleven miles out in the country. In this I include dairies that contribute milk to the city creamery, because a large part of that milk is not made into butter, but is sold to other dairymen and sold over the city. This requires an inspection of all the dairies retailing milk in the city and furnishing to the creamery.

When the ordinance was adopted providing for meat and milk inspection in the city of Lafayette, we consulted the reports of Health Officers from the prominent cities in the United States. The principal thing they showed was the number of bacteria in milk in their cities, and a few reported the sanitary condition of the stables. Upon that basis we decided that we could not carry out efficient meat and milk inspection, but that we must get at something that would be practical. There is a very large overdoing of bacteriological work in City Boards of Health, and not enough coming down directly to the things that appeal to the people engaged in business. Whether milk contains 12,000,000 or 12,000 bacteria does not appeal to many people. Whether the milk contains 6 per cent. of fat or 3 per cent. of fat does appeal to people.

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Whether the milk comes from dairies where there are ten cows in a stall only large enough for three, and those cows are badly cared for, thin and covered with lice, or whether it comes from a dairy where the stables are large and roomy and the cattle fat and in good condition does appeal to the people. We have endeavored to have the cows kept in a more cleanly condition, to have them curried and to use the spray pump and the whitewash brush about the stables. Before this year there were only two dairies in the city that did this. Now nearly all of them are whitewashed. About two weeks ago we sent out twelve rapid-cooling devices; a year ago there were only two of those devices used. This cooling device lessens the need of using preservatives. Upon that basis we have proceeded, and we are gradually getting the dairies into the condition we wish to have them. Instead of having the opposition which was very apparent among the dairymen in the beginning, where only a few of them would show us around their stables, now they invite us to come and inspect them. Instead of having only half support on the part of the people, as we did at first, we have now their heartiest support. It is a daily occurrence to have some one telephone to the office to know how their milkman stands, or where they can buy milk that they can be assured, if fed to a baby, will be all right.

Last summer at this time we made a test and found thirteen dairies below standard. Last week we made a test and found four at the standard and all the rest above. We can not accomplish all that we want to accomplish at once. It is a thing that must be gone at slowly to gain a little step by step. Last fall we found one herd with forty-seven cases of contagious abortion. We could not close up the herd at once without a great deal of opposition, but by going slowly we have secured the disposal of that entire herd. We found the same disease in another herd, and closed that out in the same way. We know of the presence of the disease in a third, and that herd is being sent to the block. If we can get an approach to healthy herds and a good degree of cleanliness in two years, we have accomplished something that the dairymen as well as the people can appreciate.

We have had more trouble with meat inspection. The first morning I went to the slaughterhouse I found a case of lumpy jaw. The rules of the United States Bureau of Animal Industry are

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applicable, I believe, to all cases of disease. The animal was not badly diseased; it was purely localized, and it was passed under the same rules and regulations it would be if slaughtered in the Indianapolis yards. We have since found cases of the disease that we have had to condemn. We found animals brought to the yards in an emaciated condition and sent them home again. We found others brought there in an advanced stage of pregnancy, and sent them home also. We found one butcher who was buying up dead animals and feeding them to his hogs which he was fattening to slaughter. There is no law against that sort of thing in the State of Indiana; he could feed them gold dollars if he wanted to. But we advertised the fact that he was feeding dead animals to the hogs. I do not think he could have secured the same amount of advertising for several hundred dollars. It had its effect, however, for nearly 9 per cent of his business fell off. Another man bought a load of hogs, and one of them died in the wagon before they were unloaded. He dressed it and hung it up with the rest. We advertised him in the same way; that is, we published in the papers the results of our inspection, and his business also fell off.

The examination of the stock is made each morning, both anti and post-mortem. This means the inspection of about 16,000 animals a year. This, together with the milk inspection, costs the city only $500 a year. We have tried to direct our energies to looking after the things that need the largest attention at the beginning, and we will gradually work up to the other things later. We have not used the tuberculin test so far, but we will in the future as soon as the dairymen will stand it, and as soon as we have gained sufficient confidence to make it assured that our position is right in this respect. I think we have followed out the proper method of meat and milk inspection for small cities. I do not believe we should begin with tuberculin tests and bacteriological tests. Don't waste time in the beginning on the higher art, so to speak, of inspection of meat and milk, but get down to the things that people can appreciate and there will be any amount of backing.

Dr. Taylor: By what process do you determine that a lumpy jaw animal shall be passed or condemned?

Dr. Bitting: If the disease is small, purely localized, no indication of infection of the lymphatics, and confined to a single area,

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it is passed for food. If the animal is emaciated and there is distribution of the disease to other organs of the body, it is condemned.

Dr. Taylor: I understood you to say the animals condemned in the dairy herds were sent to the block. Does that mean the butcher's block?

Dr. Bitting: That is what I meant. If you cut out every animal that has a bad udder and condemn it on account of that, you will arouse the ire of the dairymen. You can send it to the block, and, if it passes the government inspection, that man will get the value of his animal.

Dr. Bence: Would you pass tuberculous animals?

Dr. Bitting: Yes, sir; I would send tuberculous animals to the block. Here in this city you will find the Government inspectors passing animals that have tuberculosis; that is, those where the disease is localized. Those which have tuberculosis which is distributed through the animal condemned.

Dr. Tucker: Is a special man required for the inspection of meat and milk you speak of?

Dr. Bitting: I do the inspecting myself. It takes an hour in the morning, between 5:20 and 6:30, to make both meat inspections. The dairies require about three or four days in the month. I ride around and make the inspection myself.

SUBJECTS FOR DISCUSSION.

Quarantine—What is it? How should it be conducted?

On motion Dr. Bence was requested to speak on this subject.

Dr. Bence: It is a big subject, and one that is very hard to enforce. A quarantine is ineffectual unless you have the sympathy and co-operation of the attending physician. The physicians need educating in matters of this kind quite as much as do the laity. It is true that among the intelligent laity and the honest laity you can explain the rationale of this infection, and how long the bacteria remains in the throat after diphtheria, and how long the infection remains on the surface after scarlet fever. There are, however, people, who, if they did believe this, will not stay away from

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the infection. A good deal depends upon the positiveness of the County Secretary. If I give an order, the people of my county know I will expect it to be enforced, and that a prosecution will follow if it is not enforced. As a consequence, when a disease breaks out in a neighborhood, they are glad I am in the saddle, and they look to me.

I would like to know who here has ever seen an epidemic of measles quarantined? You all know that the mischief is done before you recognize the disease. The most infectious period is before the eruption appears. Before the eruption appears the child goes to school, to church or any other public place, and the disease spreads. I say, therefore, that it is absolutely impossible to quarantine an epidemic of measles. I tell the people that measles and diphtheria could be stamped out as well as smallpox, and that scarlet fever is a disgrace, and that we ought never to have but the one case, and that ought to be confined to the one room.

We had a few cases of smallpox that slipped over from Clay County. I work a great deal among the teachers. Every time we have a teachers' meeting I have a place on the program, and I talk to the teachers and instruct them and get them to understand the system of quarantine, and when and how and where the children should be quarantined. We are getting them so that the thing is pretty well regulated. I do not advocate closing the schools. We had forty-five cases of diphtheria in Greencastle at the beginning of the school year. The city Secretary and I co-operated. We got the principals and superintendents of schools together and decided not to close the schools. Many of the cases had been concealed, and cases had gotten in every ward in the city. We let the schools go on, but instructed the teachers that whenever a child came to school with any sickness whatever to send it home and notify its parents that it had to be examined by a physician and have a certificate that it was free from any contagious disease before it could re-enter the school. We also made a rule that when a child was absent one day it could not return the next day without a similar certificate. We have an agreement with the physicians not to charge for examinations, so that the cry can not be raised that it is a scheme to make fees for the doctors. We do not agree to treat them free, simply to examine them. We harnessed that epi-

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demic, and we found where the sick children were. A person who had been out of school could not re-enter without a certificate. A number of the concealed cases had not had a physician, and would not have had were it not for this necessity for a certificate. In that way we located every case and quarantined it. The people of the city sent their children to school after that with as much confidence as if we had not a case of diphtheria in town.

Dr. Taylor, Crawfordsville: I believe with Dr. Bence that it is impossible to quarantine against measles. The great majority of people believe that measles is inevitable and hold—what is perfectly true—that it is better to have them in childhood than later in life. I have known many people to take their children where there were cases of measles, because they said they were mild this time, and it was better to have them at that particular time.

Dr. Hunter: I have been in the habit of establishing a partial quarantine. I put up a card, so that no one will come in the house where there is a case of measles if they wish to avoid the disease.

Dr. Dale, Marion: I had occasion to inquire yesterday how the City Board of Health of Indianapolis quarantines for measles. I was stopping with an uncle whose small son had measles. The boy's mother told me the officer came up and put a card on the house just as the child was well, and that none of the family were at any time confined to the house. The other children were allowed to attend school. I don't think that is a quarantine at all.

Dr. Tucker: Since the 1st of January we have had about 200 cases of measles in our city. I did not attempt to close the schools, but I made a visit to the different schools every other day and picked out the children I thought were suffering with symptoms of measles or scarlet fever and sent them home. One morning I sent seventeen out of one room. I carded the houses, and gave strict orders that no child from any house that was carded should be allowed in the schools.

Dr. Bence: Do you keep the children of a family out of school after they have recovered, but some other member of their family has the measles?

Dr. Tucker: I do.

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Dr. Bence: Do you believe measles is a transmissible disease?

Dr. Tucker: I do.

Dr. Bence: When I go to see a case of measles I do not put on the suit I wear when I visit other cases of infectious disease. I admit children to the schools who have had the disease when some other members of the family have measles.

Dr. Kennedy: I believe with Dr. Bence that measles can not be carried in the clothing. I have practiced since 1860, and I never knew a case of measles to be carried in the clothing. As to persons that have had measles going in and out of the house, I never thought there was any danger. There is danger in scarlet fever, whooping cough and diphtheria.

Dr. Hurty: Suppose you were to take the clothes of a child in the eruptive stage of measles and put them on another child, would that transmit the disease?

Dr. Kennedy: Possibly that might. That is an extraordinary condition.

Dr. Ross: I should like to know just how long a quarantine should be kept up. In my county a young man was exposed to a case of measles, and the eruption occurred fourteen days afterward. Eighteen days after it appeared in him it appeared in a second child in the family. It appeared in a third twenty-two days after it appeared in the second, and in the fourth it appeared twenty-eight days after it appeared in the third.

Dr. Hurty: Before the subject is closed I wish to speak of a decision that has been rendered. The question was brought up whether the father of a family should be detained while there was a quarantine on the house for diphtheria. The man refused to be quarantined, because he said he was not in contact with the child, and lived in a part of the house remote from the child. The judge sustained his position. There is not a man in the State more desirous of helping this cause than this judge, but he said that was the law, and that it was right. That throws a great deal of light upon what we can do in regard to the quarantine. We doctors go right in and handle the patient, and then come out, and some of us do not take any precautions. Then people will say, "Why not

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let others do it?" If the doctor does not establish a reasonable belief that he is not infected himself, he has no right to go about other people. The Boards of Health have enormous power, but by the opinion of the Supreme Court they can not do unreasonable things, and it seemed unreasonable to Judge Roby to keep a man at home who was presumably uninfected.

Dr. Taylor: It is within the experience of every Health Officer that many reasonable persons have raised this question. They ask the question, "Why is it, if you impose so strict a quarantine, that you will let no one come to my house or go away from it, when the doctor can make his visit and then go into another house to see another patient a square away without changing his clothes or using any disinfectant? Now, why do you allow him to do that?" There is no answer to that. We have a rule, but it is never enforced. If we had an absolute rule that would require a physician to prepare himself and provide for the disinfection of his clothing, and impose a penalty if he neglects it, we would get better results. People are not so unreasonable in rebelling against quarantine when they see that physicians are not allowed to go without restriction.

Dr. Hurty: There is a specific rule of the State Board of Health in regard to that. The penalty of the health laws, if any exists, can be applied to cases of this kind. I know of very few cases where people have protested against physicians coming into their houses after they have been to houses where communicable diseases prevailed.

Dr. Taylor: That is because that family thinks the physician knows the proper thing to do.

Dr. Hurty: Some physicians uphold this and agree with us in regard to the rules, and some disagree with us. One medical society devoted a whole session to ridiculing the rules as formulated in the State of Indiana. The common people generally accept them, however, without question.

Dr. Beckes, Vincennes: The objection I have found in cases such as Dr. Hurty mentions is this: In one family the husband is allowed to go about his usual business. I ascertain before giving the permission that this is all right. He lives in a house where

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it is possible for him not to come in contact with the patient. The next case may be in a house of two rooms, and the man there wants the same privilege as the first. It is hard to grant privileges to one family that you can not grant to the other.

Dr. Hurty: It is not a privilege, it is a right, according to the judge's decision.

Dr. Dale: I think we have partially overcome that in Marion. It is a great hardship to cut a man, of poor circumstances, off from his work, because he is apt to run out of money. I state to these men that they can board away from home and continue with their work, or stay at home and obey the quarantine. I have had no trouble since I made this rule.

Dr. Hunston: I give the people the privilege of staying at home and being shut up, or of taking a bath, putting on clean clothes and going away from home and staying away. Some go away and stay. I have no trouble except where there is ignorance. Most people now take it in good part.

NUISANCES.

What is a nuisance? How shall Health Officers go about abolishing nuisances?

(Dr. Cook in the chair.)

Dr. Hurty: We have had a great many inquiries as to how we should suppress a nuisance. First, What is a nuisance? You can find that out by consulting your Book of Instructions, page 15.

(Dr. Hurty read from Constitution and By-Laws.)

The Supreme Court says that Boards of Health can not make regulations that are unreasonable, arbitrary and oppressive. They can only deal with public nuisances that are dangerous to the public health. The individual, if his property is lowered in value, or in any way injured, has action, but Boards of Health have no action. If you are appealed to, you can say, "Does it affect your health?" If the answer is, "We can not say that it does," you can do nothing. "Do you believe it will?" "Yes, I believe it will." "Very well, then, we have to do with it." As an officer you have no power to suppress that nuisance; that power is in your board.

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You can go and tell the exact conditions that exist, and add to that report your recommendations, present them formally to your board, and then await your orders.

Dr. Smith: If a County Board of Health meets only every thirty days, are you obliged to wait for that?

Dr. Hurty: If it is an extraordinary case, you can call a special meeting.

Dr. Stanley: In a case where a man had been keeping 3,000 or 4,000 pounds of fertilizer in a barn on an alley, the neighbors all claimed that it was a nuisance. I went to the man and notified him that it was a nuisance, and he promised to take it out in the course of a week. I told him that was too long to wait. He then said he would remove it as soon as possible. I waited for a week, and as he had not removed it, I filed an affidavit against him. I had before that given him a written notice to remove it. A warrant was gotten out, and he was arrested and the Mayor of the city found him guilty. He took an appeal to a Justice in an adjoining township. The Justice fined him a dollar and costs, and he took a change back to a court. It has been in court ever since last summer, but has been put off from time to time.

Dr. Hurty: At any rate, you got the thing removed, and you have caused him a great deal of trouble. We should not be discouraged in our work because of the delays of the courts.

Dr. Von Osinsky: In one family where I was called there were two cases of scarlet fever, and the family refused to be quarantined. The Secretary had the people arrested, and the Justice told them to go free, that the Health Officer had no right to quarantine them. He said the rules of the Health Board were not laws, but by-laws.

Dr. Hurty: Had your lawyer known that the Supreme Court of the State had passed a ruling on the subject that need not have gone by default. The Supreme Court has said that all the rules of the State Board of Health, if reasonable, shall be regarded as law.

Dr. Von Oinsky: The lawyer did know that, and did say it, but the judge held to his ruling.

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Dr. Derbyshire: Have we, as Health Officers, any jurisdiction in cases where there is simply a bad odor, but no evidence of its being deleterious to the health of the people? Have we any business to interfere with anything of that kind unless it can be proved that it is deleterious to the public health?

Dr. Hurty: The public Board of Health can deal only with things that are deleterious to the public health. If people can testify that it made them sick, made them vomit, as bad odors often will, then it is deleterious to health. That question comes to me frequently on account of slaughterhouses in the cities. I think the way to manage that is to say to the people who complain, "Will you go into court and swear that it is deleterious to your health, and get other people to do the same thing? Then I can act."

Dr. Taylor: I always say that when an odor of that kind will not produce a disease, it will, by disturbing the system predispose to other diseases, and in that way is deleterious to health.

Dr. Tucker: We had a case of that kind. The rear of a butcher shop abutted on a candy kitchen, a grocery and a drug store. The candy kitchen man complained, and, when I asked him if it injured his health, he said it did not, but that it injured his business, because his candy tasted of it. Part of the odor was caused by the rendering of tallow in the shop. The druggist complained that he had to use various kinds of perfumes in his drug store to keep down the odor. We had that shop removed.

Dr. Hunter: We had some butchers in Bedford that would slaughter animals behind their shops in the city. We had no law to prevent them, but had an ordinance passed forbidding the slaughter of animals within the city limits.

Dr. Sheets: If any nuisance is covered by the laws of the State or by an ordinance of a city, we will have no trouble with it. I do not like to make complaints myself, and usually have the person who is injured make the case. If anything affects myself or my family, then I take it up myself and make the complaint. My greatest trouble is with poultrymen. Poultry houses usually sooner or later become offensive and endanger the public health.

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To what extent, if any, should the State Board of Health be expected to furnish diagnosis of infectious and contagious diseases?

Dr. Sheets: I have had trouble with the blank the State Board of Health furnishes us. At the end it says, "Report ——, day of ——, 1901." I find sometimes that the doctor carries it around in his pocket for a week before I get it. The patient may have died of diphtheria, and this late report is the first news I have had of the fact that diphtheria was in town.

Dr. Smith: That is not the fault of the blank; it is the fault of the physician.

Dr. Sheets: It is the fault of both. A place should be left for the date of filling out and another place for the date of the return.

Dr. Ross: I believe the State Board of Health ought to be empowered to send a specialist where smallpox is suspected. I know of a case that was diagnosed as grippe by a physician in my vicinity. That was on the first visit. The next time the physician saw the patient he said it was chickenpox. The next morning he thought it was smallpox, and advised the patient to have some one else see him. They telegraphed for me. I went over and it seemed to me a very plain case of smallpox. While it may be regarded in the light of the duty of the Health Officer of the county to diagnose these contagious troubles, I do not think he ought to be asked to do it for the small remuneration he receives.

Dr. Bence: I think about all we ought to require of the State Board of Health is to settle disputes where doctors disagree in diagnosis. In cases of diphtheria I have received great benefit from a diagnosis on cultures sent to the State Board of Health. They were mild cases where a very small amount of membrane appeared in the throat. My diagnosis would be disputed if I said it was diphtheria, but when I could refer to the diagnosis of the State Board of Health, they were satisfied that it was true diphtheria.

Dr. Dixon: Some time ago I had a case that was reported to me as smallpox. I telephoned Dr. Hurty, and he told me to quaran-

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tine immediately and that he would be down on the first train. He came and pronounced it smallpox. The patient was a soldier who had but recently returned from Cuba. We quarantined the case, and a great deal of fuss was made about it. Most of the doctors disputed the fact that it was smallpox. They suggested that we call Dr. Wagner down. Dr. Wagner and Dr. Hurty came, and both pronounced it smallpox. The next case did not occur until six or eight months afterward, and this time there was no talk or opposition to a quarantine. The State Secretary should be called in to settle disputes. On account of the very cordial support that is being given by our present Governor, we are able to do that.

Dr. Hurty: You know there was a $50,000 fund appropriated eight years ago for the suppression of epidemics and contagious diseases. It is under the control of the Governor. The present Board went to Governor Durbin and asked him about it. He himself told you how it was. He first exacted a promise from the State Board of Health to use energy and care and he would give hearty support. He told us to send in any reasonable bills for this service, and now we are able and willing to send an expert to settle disputes for you. Remember, however, that you can always settle disputes in cases of diphtheria as Dr. Bence has suggested. You can always settle such disputes by sending the cultures. Let the State Board of Health be a court of last resort.

Dr. Taylor: The fund spoken of by Dr. Hurty was provided for during my connection with the State Board of Health, and we very soon found that there was a keen recognition on the part of the people of the State that there was such a fund, and it was not very long until we had propositions to draw on that fund from all over the State. We saw there was a chance for great abuse, and we referred the matter to the Governor at a joint conference with him. We had a delegate here from a certain city in the eastern part of the State who desired to draw on the fund to a considerable amount. The Governor told them he expected the municipality to deal with the epidemic as long as they could do it. When it became a greater burden than their resources could bear, he would help them, but he would require an itemized account of everything they had drawn on that fund for. You will find a growing tendency to call on this fund to save the funds of towns, and to throw

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the whole responsibility on the State Board of Health. To keep that fund intact you will need to guard it with the greatest care. I think, too, there is danger of abusing the privileges of the State Board of Health. Smallpox is no new disease; it is more or less familiar to most of us, and with the assistance of our reports and the aid of the local Health Officers, there ought not to be great difficulty about it, and the State Board of Health should only be called on when all other efforts to settle disputes have failed.

How should garbage be disposed of in towns?

Dr. Beckus, Vincennes: Two or three years ago I attended a meeting similar to this, and went back home and made a report to our Council. I recommended to them the consideration of this question. For the summer months they provided a garbage system and the depositing of the garbage south of the city, but not far enough out. I was persistent in the matter, and have just now begun to get them to do what I recommended at that time. We have now under construction a garbage reduction plant, and have a system of collecting every other day through the hot weather and twice a week in cold weather. The city is beginning to see the need of this kind of disposal of its garbage, and I am glad to say I was in some way instrumental in bringing it about.

Dr. Hurty: The question of the disposal of garbage in towns is one of considerable importance; yet, it is not given much attention. In the small towns, where there is simply a Town Board of Trustees, the people will have hogs and chickens and heaps of garbage, and they throw slop water on the ground. A simple ordinance passed by the Town Board would regulate the whole matter. A small town will not likely buy a reduction plant, although there are some efficient and cheap ones to be had. I would recommend that an ordinance be passed that all household garbage shall be kept in galvanized iron cans made with covers. Let them feed their garbage to the hogs in the small town if they will, but let the pens be regulated. A simple ordinance will do it. It is desirable and profitable, and should be done.

I think county officers should recommend to the towns the necessity of taking action upon this matter. In this city we not only have to keep the garbage in cans, but must keep it in a place where

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the garbage collector can get it, and it is burned to ash in the garbage crematory. We have to keep a separate can in which to keep trash, such as paper, sticks, etc., and they carry that away separately. Where you have no sewers you will have to resort to sinks for dish water and slop water. Or, if a person has a garden, they can throw it out evenly over the surface, and the ground will take care of it all right.

Adjournment.

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FIFTH SESSION.

The fifth session was called to order at 2 p. m. by Dr. Cook.

The first question discussed was—

How about typhoid fever in your jurisdiction?

Dr. Arwine: We have typhoid fever in our county, and have been having it every year for some time, especially in the eastern and southeastern portions of the county. That portion of the county is underlaid by limestone. It is difficult to get ice there; we can not get the people to use anything to cool the water; they will drink it warm. They have wells eight feet deep, and an hour after a rain they will be muddy.

Dr. Hurty: Typhoid fever is a disgrace to civilization. It is a filth disease, and, when we quit eating and drinking filth, we will quit having typhoid fever. I heard Dr. Benjamin Lee, of Philadelphia, speak upon this matter. He said: "India has its cholera, and it is a disgrace to those people. South America and Cuba—that was before our occupation of Cuba—have yellow fever, and it is to their disgrace; but worse than all, and killing more than yellow fever and cholera, is the typhoid fever of the United States." Typhoid fever is one of the velvet-footed diseases Dr. Cox spoke of. We can not do a better work than to be continually crying out and calling attention to the fact that as soon as you want to get rid of typhoid fever is to do it, for all you have to do is to cease eating and drinking human filth. That will settle it. It is within our control, and it is a disgrace to us not to control it. I think that you county officers would do well, indeed, if, every time a death was reported, you would take occasion to remark quietly, "Another disgrace!" After a while the people will begin to recognize the great work you have done. I regret that our laboratory was not allowed, for then we could have aided you greatly in the diagnosis of typhoid fever. It is hard to determine whether it is typhoid fever or not. With a laboratory and the reaction and the diaso test the diagnosis could be helped to a great degree. That was a good economical measure which was defeated.

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Dr. Arwine: We may say that not only typhoid fever, but every other fever is a disgrace. Purity, and purity alone, is a preventive of disease. If we can get such a degree of purity that we can avoid typhoid fever, we will have taken a big stride along the path that will prevent disease.

Dr. Kennedy: I got Park-Davis vaccine in hermetically sealed tubes and vaccinated a few cases. In my mind it is a failure. The sore was not sufficient to satisfy me or to satisfy the patient either. I complained to the druggist, and he said he would exchange it for Mulford's. I used that kind once, and got a very satisfactory sore. Whether it is necessary for us to have such a sore as in the last case, or whether just a little papule with a little redness surrounding it is sufficient for a good test of vaccination, is a question I want to put before you.

Dr. Cook: I believe the size of the scab or sore does not cut much figure in vaccination.

QUESTION BOX.

There being no physician willing to take the position of Health Officer, the County Secretary appointed a private citizen to the office. He does not perform his duty, but will not resign. How are the Trustees to get rid of him?

Dr. Hurty: The County Secretary had no right to appoint him; the man never occupied the position, so there is nothing to resign from. They had no right to appoint a Health Officer not a physician. You can appoint a deputy who can issue permits of burial, but that is the only duty he can perform. If you have no physician in your town, you can not have a Health Officer. The man has never been a valid officer, and has no claim, nor would he have if the whole Town Board had appointed him.

At what distance from driven wells twenty or thirty feet deep can vaults be placed?

Dr. Hurty: The well reaches the first water-bearing gravel, and the vault does not reach that far; but if it fills with water after rains, and the water sinks away and goes down to the water-bearing gravel, it will affect the water in the well. The probability of pol-

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lution is so great that to put driven wells down to the first water-bearing gravel where there is a privy vault near is itself a foolish procedure, and invites sickness.

Dr. Dixon: We have an ordinance forbidding the putting in of a privy vault unless it is laid in cement. We regard this as being safe. Even then we do not allow them to be placed nearer to a well than 100 feet.

What about the recent law passed which allows children from families in which there is contagious and infectious disease to attend schools? I have been excluding them.

Dr. Hurty: I don't know until it goes through the courts, and we are trying to grind out a case in this city. You know the Louttit law provided that no child shall be precluded from attending school who is in good mental and physical condition. That will mean there will be no authority for keeping children out of the schools from houses where there are infectious or contagious diseases provided they are themselves well. It is expected that the Supreme Court—if the question ever gets there—will decide that such a law as that should have no such interpretation. The Legislature has no power to pass a law giving people a permit to set fire to buildings. Has it power to give a permit to people to carry disease? Our recommendation is that you go ahead as of yore. If you are sued in any way the prosecutor will have to defend you.

Is it not better in trying to remove a nuisance to have the citizen who is damaged bring the suit?

Dr. Hurty: It would be better to have him do it, but the law says of all Boards that they shall remove and abate nuisances. Attorney-General Taylor said once, in speaking unofficially, that Boards of Health had a right to proceed summarily and remove a nuisance. He said they might even go so far as to get wagons and remove it, if possible. But he also said that if it was proved afterward that it was not a nuisance, he could recover damages.

I have just heard that the Supreme Court has this morning handed down a decision that will be of great importance to us. It is a decision sustaining Dr. Horne, Health Officer of Wells County, in a position he took in regard to vaccination. If the Supreme

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Court has sustained a Health Officer in ordering vaccination, it is a very important decision. The court has reaffirmed the power of the Health Boards to order vaccination among school children. Dr. Horne is here, and will give you the history of the case.

Dr. Horne, Bluffton: We have in our county a few anti-vaccinationists. It happened that, upon the city school board of Bluffton, there was an anti-vaccinationist, and other officers who believed much as he did. The town was threatened with an epidemic of smallpox. I had the County Board of Health pass a ruling enforcing vaccination among school children. The City Health Board passed the same rule. The school board refused to enforce the rule. Suit was brought. It happened that the judge rendered his decision to the newspaper the night before he rendered it from the bench. I learned from one of the reporters that I could read the decision by going to the newspaper office. I went over and found out what the decision was, and next morning went up and made a motion to dismiss the case, as I did not want any decision against vaccination. I knew he was opposed to vaccination. He said we did not have any right to dismiss the case, but we did. Finally we let that be the decision. We appealed to the Supreme Court, and the Supreme Court has decided that the County Board of Health of Wells County and the City Board of Health of Bluffton had a right to order the school board to enforce vaccination among the children, and if the children were not vaccinated they could be kept out of school.

Dr. Hurty: This question has been asked of us several times, Where a child is kept out of school for cause, what is the consistency in the Truant Officer's forcing him back? The Attorney-General has decided that if a child is covered with vermin, he may be kept out of the schools. It is right to force him back through the Truant Officer, because the disability can be removed. In the case of vermin, the same can be removed and then the child is eligible. In case of vaccination, the child can be vaccinated very quickly, and then he is eligible to the schools. There is no conflict in the two laws. You can exclude pupils for any right cause, but when that cause is removed, they must be admitted again.

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Have you any tuberculosis in your jurisdiction?

Dr. Hurty: I will tell you what should be done in regard to tuberculosis in this State. We should have a State sanatorium for indigent consumptives. We are already taking care of them in the poorhouses and by outdoor relief in townships. We are taking care of them in an expensive way, and in a way which insures the perpetuation and spread of the disease. Every poorhouse in which consumptives have been treated is infected. Now, when Indiana wants to restrict this white plague, when Indiana wants to save money, when Indiana wants to enter into a higher state of civilization, she will establish such a sanatorium. Suppose we had such a sanatorium built for that purpose. The indigent consumptive is taken there and cared for in the right way, and in about 10 or 12 per cent. of all cases there is a chance for recovery. In that sanatorium those who do recover—and perhaps 15 per cent. may—will go home fully instructed about how to prevent consumption, what care they should take of their sputum, and how to deport themselves in every way to prevent the spread of the disease. Those who die—and a majority of them will—will be cared for in a proper manner to the last moment. And while being cared for, they have infected no house and have not distributed the disease. This sort of sanatorium will not only be a great economy, but it will be a great humanity. Massachusetts has such an institution, New York is now building one, Connecticut has one; in fact, all of the Eastern States that are ahead of us have them and are saving money.

Dr. Miller: Has any Health Officer any authority to prevent the sale of household goods from an infected house where a woman had died with consumption? The case I have in mind is one where the wife died with consumption after a sickness lasting a year, and the husband, after her death, sold the household effects, and sold her clothing. Is there any danger from that, and have we authority in the matter?

Dr. Hurty: It is decidedly dangerous. Your Board can prohibit such a sale unless everything had been disinfected, and they can prescribe how they shall be disinfected. You can not prevent it, but your Board can.

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Dr. Bence: There is no rule of the State Board of Health to do that, is there?

Dr. Hurty: No; but it might be well to pass one.

Dr. Bence: The State Board of Health must promulgate a ruling to that effect. Then the rules and regulations and promulgations must be published. In the law as published we have nothing to enable us to do what you said this man could do. You can give advice, but you can not enforce quarantine or isolation in cases of tuberculosis.

Dr. Hurty: Dr. Miller asked if the clothing and household goods could be sold. I said his Board has power to issue an order against that. We do know and can prove that consumption can be disseminated through infected clothing.

Dr. Boswell: My understanding is that the rules of the State Board of Health provide that any local Health Board can pass any ordinance that does not conflict with the rules of the State Board of Health. I do not pay any attention to it, but just go on and have those things passed, and after they are done, what are you going to do about it?

Dr. Sheppard: I believe it would be well if the State Board of Health at its next regular meeting would enact a clause of that kind. You know when we come before the County Boards, the first thing they say is, "Well, what does the State Board of Health say about it?" Then they say they will leave it to them.

Dr. Ross: I believe all the authority we need in a case of that kind we already have. I believe a County Board has full authority to pass any rule that does not conflict with the rules of the State Board of Health and the statute law, to protect the health of the people of a community.

Dr. Cook: In your judgment, Dr. Bence, is the milk or the meat from a tuberculosis cow fit for use, whether the disease is circumscribed or general?

Dr. Bence: I once heard Dr. Hibberd ask Dr. Bitting this question: "Has it ever been demonstrated that tubercle bacilli can pass the digestive organs?" Dr. Bitting was a little stumped, and

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told of the experiments with cows and calves, putting a non-tuberculous calf with a tuberculous cow, and vice versa. Dr. Hibberd said he had asked the same question of one of the most noted bacteriologists of the day, and he would not answer it, but promised to send him some publications bearing on the subject. Now, the question is whether tubercle bacilli can pass the digestive juices or not. The majority of bacteriologists claim not. Looking at it from that point, I doubt whether milk with tubercle bacilli in it is very dangerous to the animal economy, or whether flesh from tuberculous cow is very dangerous to the animal economy. I have no doubt that the digestive process completely destroys tubercular bacilli, and that the bacilli that are taken into the system are taken through the respiratory organs. That, I think, is Dr. Bitting's opinion. I don't know that tuberculosis is very infectious. I understand that in the Brompton Hospital for Consumptives they claim that in eighteen years they have never had a nurse to contract the disease. This, too, long before much care was exercised in the matter of sputum. I think the tuberculosis bacilli will not be very infectious unless there is good soil for it.

There is one thing that is not settled, and that is the position the Secretaries are going to take on the Louttit bill. I think there ought to be concerted action. As far as Putnam County is concerned, all teachers are going to get instructions to exclude children from houses where there is infectious disease, except where there is measles. I think we should keep them out, and then the men whose children are kept out will have to bring mandamus proceedings to get them in. We will put the burden of fighting it on them.

I beg leave to offer the following resolution:

"Resolved, That we endorse the recommendation of the State Board of Health to exclude children from the public schools and other public places who come from homes in which there are infectious or contagious diseases."

On motion the resolution was adopted. There were no negative votes.

On motion of Dr. Hurty the following telegram was sent to Indiana's Grand Old Man in Medicine and Hygiene, Dr. James F. Hibberd, of Richmond:

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Indianapolis, May 27, 1901.

To Dr. Jas. F. Hibberd, Richmond, Ind.:

The eleventh annual conference of State Health Officers send greetings and best wishes to Indiana's veteran Health Officer.

At the next session the following reply from Dr. Hibberd was received:

Richmond, Ind., May 28, 1901.

Conference of Health Officers, State House, Indianapolis, Ind.:

Your greetings bring gladness to me; may your labors bring gladness to the people. JAS. F. HIBBERD.

Adjourned sine die.

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THE FOLLOWING HEALTH OFFICERS WERE IN ATTENDANCE AT THE ELEVENTH ANNUAL CONFERENCE OF STATE HEALTH OFFICERS, MAY 27 AND 28, 1901:

1. Carl Proegler.....Ft. Wayne.
2. A. E. Powell.....Marion.
3. Brose S. Horne.....Bluffton.
4. Dr. G. E. Hoffman.....Rochester.
5. Dr. R. Bosworth.....Winchester.
6. Geo. E. Squier.....Brookville.
7. S. M. Ried.....Muncie.
8. Hugh Cowing.....Muncie.
9. H. R. Spickerman.....Muncie.
10. R. T. Olmsted.....Versailles.
11. G. W. Bence.....Greencastle.
12. H. W. Millikan.....Sheridan.
13. M. T. Didlake.....Monticello.
14. W. J. Hoadley.....Danville.
15. John Kennedy.....Paragon.
16. H. W. Ridpath.....Indianapolis.
17. J. N. Jerome.....Evansville.
18. R. H. Smith.....Kokomo.
19. Nathaniel D. Cox.....Spencer.
20. Burnham C. Dale.....Marion.
21. Frank C. Hershey.....Carmel.
22. Norman E. Beckes.....Vincennes.
23. O. V. Schuman.....Columbia City.
24. W. H. Cole.....Switz City.
25. Geo. W. Shepherd.....Redkey.
26. Paul J. Barcus.....Crawfordsville.
27. J. S. Arwin.....Columbus.
28. G. A. Schultz.....Lebanon.
29. D. S. Stanton.....Portland.
30. John G. Ross.....Portland.
31. Henry C. Gemmill.....Markle.
32. I. C. Lambert.....Colfax.
33. Edgar Cox.....Kokomo.
34. A. S. Dickey.....Tipton.
35. D. W. Dryer.....Lagrange.
36. R. A. Jamieson.....Patriot.
37. Chas. Loomis.....Florence.
38. J. M. Littler.....Ingalls.
39. Joel Cook.....Orestes.
40. S. C. Newlin.....Anderson.
41. A. S. Tilford.....Martinsville.
42. H. D. Denaut.....Walkerton.
43. J. N. Reece.....North Liberty.
44. L. L. Gilmore.....Monroe City.
45. Chas. E. Gould.....Rochester.
46. Marcus Spalding.....Oolitic.
47. Isaac Fry.....Sandborn.

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48. W. H. Sheets.....Jeffersonville.
49. J. H. Forrest.....Marion.
50. A. H. Farquhar.....Ridgeville.
51. E. Derbyshire.....Connersville.
52. J. H. Carson.....Brazil.
53. F. S. Hunter.....Bedford.
54. John N. Taylor.....Crawfordsville.
55. B. E. Miller.....Albion.
56. Clark Cook.....Fowler.
57. E. D. Laughlin.....Orleans.
58. Jos. Von Osinski.....Crown Point.
59. F. A. Tucker.....Noblesville.
60. T. Henry Davis.....Richmond.
61. F. W. Fanning.....Butler.
62. Geo. C. Lewis.....Madison.
63. S. M. Bennett.....New Goshen.
64. F. L. Stone.....Pendleton.
65. Milton L. Humston.....Goodland.
66. John M. Talbott.....Terre Haute.
67. William Daniel.....Corydon.
68. H. F. Costello.....Decatur.
69. J. W. Dixon.....Franklin.
70. W. H. Lane.....Angola.
71. I. O. Beckwith.....Lewis.
72. J. B. Dolson.....Pimento.

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PROCEEDINGS AND REPORT

OF THE

STATE BOARD OF HEALTH

For the Year 1902.

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PROCEEDINGS AND REPORT OF THE STATE BOARD OF HEALTH FOR THE YEAR 1902.

HON. WINFIELD T. DURBIN, *Governor of Indiana:*

The State Board of Health herewith respectfully presents its Twenty-first Annual Report for the year ending October 31, 1902:

The four regular quarterly meetings of the Board for the year ending October 31, 1902, were held October 11, 1901; January 10, 1902; July 11, 1902, and October 10, 1902. Special meetings were held as follows: In 1902: March 7, April 25, May 29, June 16. The doings and investigations of the Board for the year are set forth in the minutes of the above meetings, which are appended. The fiscal report of the Board is also appended, and we also append the transactions of the annual meeting of the State Health Officers.

VITAL STATISTICS.

The vital statistics which are collected for the calendar year can not be given until the said year has expired, which will be December 31, 1902. It will then take sixty or probably ninety days in order to tabulate and analyze said statistics. These statistics are collected strictly according to the commands of the law, and are of great economic and governmental value. It is with some pride we inform you that the vital statistical work of this Board has attracted wide attention and praise on account of its accuracy. Under the system adopted every death in the State is recorded on a separate certificate which is on file in the office of the State Board where it is available at any time, for the purpose of securing pensions and life insurance and for the settling of estates. There are daily demands at this office for transcripts of these death certificates from citizens of the State. The greatest usefulness of these statistics is found in the information they give of the character, whereabouts and extent of disease and death. This information,

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if practically applied, would increase the health, wealth and happiness of our citizens. Unfortunately, however, the appropriation heretofore given for health work is only sufficient to gather the vital statistics and meet petty expenses. It is hoped the next Legislature will permit the practical application of the knowledge gained from the statistics so that the disease and death rates may be reduced. We respectfully request, therefore, that as chief executive, you recommend in your message to the Sixty-third General Assembly, that proper provisions be made for the practical prevention of disease and death among the people.

To show the opportunity which offers in this State for the prevention of unnecessary diseases and unnecessary deaths, we present a table compiled from our statistics as follows:

DEATHS FROM PREVENTABLE CAUSES IN INDIANA IN 1901.

Consumption	4,569
Typhoid fever	1,198
Scarlet fever	149
Diphtheria	554
Whooping cough	181
Diarrhoeal diseases	1,776
Measles	161
Smallpox	21
	8,906

The sum total of deaths means fully ten times as many cases of sickness and there were, therefore, 8,609 deaths and not less than 86,090 cases of sickness which are classed as preventible. It is not claimed that it is possible in short order to prevent all of this awful loss, but it is very certain that it is possible to prevent a large proportion. It will, of course, be admitted by all, that a life unnecessarily lost by disease is as valuable as one lost unnecessarily by firearms or railroad accidents. The State is active and diligent in the prevention work necessary to prevent death by murder and accidents, and why should it not be equally diligent in the prevention work which science and practice show will prevent much disease and death? Before leaving the subject of statistics we wish further to inform you that the United States Government, recognizing the accuracy and the consequent great value of Indiana's death records, has requested transcripts of every

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death record in Indiana for the year 1901, and $730.88 has been appropriated from the funds of the United States Statistical Bureau to pay for the work of transcribing.

HEALTH LEGISLATION.

The health law commands that the State Board shall annually make "such suggestions with regard to legislation as it may deem important in reference to the public health." In obedience to this command, we recommend the creation of a State Laboratory of Hygiene, a bill for which we present herewith. We also recommend the passage of a quarantine law, a bill for which is herewith presented.

We have carefully studied these two recommendations and we are very sure that, if the bills as drafted become law, and then are properly enforced, that benefits will be secured to the people which will be impossible to estimate.

These recommendations are, undoubtedly, in the practical lines of economy and governmental advancement. We respectfully request that you endorse and recommend the enactment of these bills in your message to the next General Assembly.

(Signed) J. H. FORREST,
President.
WM. N. WISHARD,
Vice-President.
T. HENRY DAVIS,
CLARK COOK,
J. N. HURTY,
Secretary.

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FINANCIAL STATEMENT.

RECEIPTS.

By appropriation, office expenses	$6,000 00
By appropriation, Secretary's salary	2,400 00
By appropriation, Chief Clerk's salary	1,000 00
Total	$9,400 00

DISBURSEMENTS.

1901.			
Nov.	5.	American Public Health Association	$5 00
"	22.	George F. McGinnis, postage stamps	50 00
"	30.	Maud Hoffman, clerical services	25 00
"	30.	Maude Linn, clerical services	45 00
"	30.	May Stuart, clerical services	45 00
"	30.	Eva D. Campbell, clerical services	45 00
Dec.	31.	Maud Hoffman, clerical services	25 00
"	31.	Florence Froschauer, clerical services	25 00
"	31.	Maude Linn, clerical services	45 00
"	31.	May Stuart, clerical services	45 00
"	31.	Eva D. Campbell, clerical services	45 00
"	20.	George F. McGinnis, postage stamps	50 00
1902.			
Jan.	10.	J. L. Anderson, traveling expenses	12 12
"	10.	W. N. Wishard, expenses attending Board meeting	10 00
"	10.	T. Henry Davis, expenses attending Board meeting	14 80
"	10.	J. H. Forrest, expenses attending Board meeting	42 30
"	10.	Clark Cook, expenses attending Board meeting	18 50
"	10.	American Toilet Supply Co., laundry	2 25
"	10.	Central Union Telephone Co., rental and toll	23 65
"	10.	Pettis Dry Goods Co., soap	49
"	10.	New Telephone Co., rental	10 00
"	10.	New Long Distance Telephone Co., toll	1 50
"	10.	Western Union Telegraph Co., telegrams	4 51
"	10.	Cyrus A. Smith, formaldehyde and generator	10 38
"	10.	Wm. B. Burford, printing and stationery	338 29
"	10.	H. P. Newman, Treasurer, dues American Medical Association	5 00
"	10.	Journal Applied Microscopy and Laboratory Methods	1 00
"	10.	Editor Sanitarian, subscription	20 00
"	10.	Bowen-Merrill Co., books	8 00
"	10.	J. N. Hurty, Secretary, traveling expenses	126 19
"	23.	George F. McGinnis, postage stamps	50 00
"	31.	May Stuart, clerical services	45 00
"	31.	Eva D. Campbell, clerical services	45 00
"	31.	Florence Froschauer, clerical services	29 00
"	31.	Maude Linn, clerical services	45 00
"	31.	Maud Hoffman, clerical services	25 00

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DISBURSEMENTS—Continued.

Mch.	1.	May Stuart, clerical services	$45 00
"	1.	Eva Campbell, clerical services	45 00
"	1.	Maude Linn, clerical services	45 00
"	1.	Maud Hoffman, clerical services	25 00
"	1.	Florence Froschauer, clerical services	25 00
"	1.	George F. McGinnis, postage stamps	50 00
"	1.	Lulu Keeler, clerical services	37 00
"	7.	J. H. Forrest, expenses attending Board meeting	17 60
"	7.	T. Henry Davis, expenses attending Board meeting	14 70
"	7.	W. N. Wishard, expenses attending Board meeting	10 00
"	7.	Clark Cook, expenses attending Board meeting	16 75
"	11.	Lieut. McCormick, wrapping annual reports	1 50
"	11.	Carl Anderson, wrapping reports	4 50
"	11.	New Long Distance Telephone Co., toll	2 85
"	11.	New Telephone Co., rental	10 00
"	11.	New York store, soap	1 01
"	11.	Western Union Telegraph Co., telegrams	2 47
"	11.	United States Express Co., express	22 25
"	11.	Central Union Telephone Co., rental and toll	23 85
"	11.	Wm. B. Burford, printing and stationery	409 96
"	11.	American Toilet Supply Co., laundry	2 25
"	11.	J. N. Hurty, Secretary, expenses	99 81
"	11.	Bowen-Merrill Co., books	9 75
"	11.	J. H. Forrest, expenses attending Board meeting	15 60
"	11.	Clark Cook, expenses attending Board meeting	17 50
"	11.	T. Henry Davis, expenses attending Board meeting	14 70
Apr.	1.	May Stuart, clerical services	45 00
"	1.	Eva Campbell, clerical services	45 00
"	1.	Florence Froschauer, clerical services	30 00
"	1.	Maud Hoffman, clerical services	25 00
"	1.	Maude Linn, clerical services	45 00
"	1.	Lulu Keeler, clerical services	40 00
"	5.	Geo. F. McGinnis, postage stamps	50 00
"	5.	Lulu Keeler, clerical services	8 35
"	11.	Jas. A. Egan, Treasurer, dues	10 00
"	11.	Edwin Plummer, 5 dozen lantern slides	30 00
"	11.	Wightman & Co., Ltd., subscription	1 83
"	11.	Harry E. Bishop, expenses	6 70
"	11.	A. N. Bell, editor Sanitarian	1 75
"	16.	Eva D. Campbell, clerical services	45 00
"	25.	T. Henry Davis, expenses attending Board meeting	14 10
May	1.	May Stuart, clerical services	45 00
"	1.	Maude Linn, clerical services	45 00
"	1.	Florence Froschauer, clerical services	30 00
"	1.	Maud Hoffman, clerical services	25 00
"	3.	George F. McGinnis, postage stamps	50 00
"	29.	Dr. W. N. Wishard, attending Board meeting	10 00
"	29.	Dr. T. Henry Davis, attending Board meeting	14 10
"	29.	Dr. J. H. Forrest, attending Board meeting	24 80

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DISBURSEMENTS—Continued.

May	31.	May Stuart, clerical services	$45 00
"	31.	Maude Linn, clerical services	45 00
"	31.	Florence Froschauer, clerical services	30 00
"	31.	Maud Hoffman, clerical services	25 00
June	5.	George F. McGinnis, postage stamps	50 00
"	16.	T. Henry Davis, attending Board meeting	14 20
"	16.	J. H. Forrest, attending Board meeting	13 15
July	1.	May Stuart, clerical services	45 00
"	1.	Maude Linn, clerical services	45 00
"	1.	Florence Froschauer, clerical services	30 00
"	1.	Eva D. Campbell, clerical services	45 00
"	1.	Maud Hoffman, clerical services	25 00
"	11.	Clark Cook, traveling expenses	70 84
"	11.	T. Henry Davis, attending Board meeting	14 20
"	11.	T. Henry Davis, attending American Congress of Tuberculosis	53 65
"	11.	J. H. Forrest, attending Board meeting	15 65
"	11.	J. L. Anderson, expenses	4 67
"	11.	Western Union Telegraph Co., telegrams	6 80
"	11.	Wm. B. Burford, printing and stationery	476 65
"	11.	Bowen-Merrill Co., books	6 00
"	11.	American Toilet Supply Co., laundry	2 25
"	11.	George F. McGinnis, postage stamps	50 00
"	11.	New York store, soap	88
"	11.	Dr. N. D. Brayton, expenses account smallpox	149 01
"	11.	Central Union Telephone Co., toll and rental	42 40
"	11.	J. N. Hurty, traveling expenss	160 42
"	11.	Cyrus Smith, 2 boxes culture tubes	5 00
"	11.	Chas. E. Ferguson, expenses account smallpox	150 50
"	11.	Van Publishing Co., subscription	2 00
"	11.	New Telephone Co., rental and toll	11 80
Aug.	1.	Maud Hoffman, clerical services	35 00
"	1.	May Stuart, clerical services	22 50
"	1.	Eva D. Campbell, clerical services	45 00
"	1.	Florence Froschauer, clerical services	30 00
"	1.	Maude Linn, clerical services	45 00
Sept.	2.	Eva D. Campbell, clerical services	45 00
"	2.	Maude Linn, clerical services	45 00
"	2.	Florence Froschauer, clerical services	30 00
"	2.	Maud Hoffman, clerical services	35 00
"	2.	May Stuart, clerical services	45 00
"	2.	George F. McGinnis, postage stamps	50 00
Oct.	1.	May Stuart, clerical services	45 00
"	1.	Eva D. Campbell, clerical services	45 00
"	1.	Maud Hoffman, clerical services	35 00
"	1.	Maude Linn, clerical services	45 00
"	10.	Wm. B. Burford, printing and stationery	293 69
"	10.	New Telephone Co., rental and toll	4 82
"	10.	American Toilet Supply Co., laundry	2 25

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DISBURSEMENTS—Continued.

Oct.	10.	Central Union Telephone Co., rental and toll	$6 60
"	10.	J. N. Hurty, traveling expenses	67 24
"	10.	United States Express Co., expressage	1 35
"	10.	Bowen-Merrill Co., books	5 00
"	10.	Western Union Telegraph Co., telegrams	3 86
"	10.	Mary Burke East, reporting conference	25 00
"	10.	T. Henry Davis, expenses attending Board meeting	14 20
"	10.	J. H. Forrest, expenses attending Board meeting	12 30
"	10.	Clark Cook, expenses attending Board meeting	17 50
"	10.	W. N. Wishard, expenses attending Board meeting	10 00
"	10.	B. H. Herman & Co., frame	3 50
"	10.	H. C. Hendrickson, plans and specifications	25 00
"	24.	Cyrus A. Smith, 4 boxes serum tubes	10 00
"	24.	Smith-Premier Typewriter Co., typewriter	47 75
"	24.	Wm. B. Burford, printing and stationery	77 97
"	24.	New York store, soap	1 10
"	24.	George F. McGinnis, postage stamps	19 64
"	31.	Maud Hoffman, clerical services	35 00
"	31.	Eva Campbell, clerical services	45 00
"	31.	Maude Linn, clerical services	45 00
"	31.	May Stuart, clerical services	45 00
		Total	$6,000 00

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MINUTES AND TRANSACTIONS

OF THE

Indiana State Board of Health,

FOR THE YEAR ENDING OCTOBER 31, 1902.

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FIRST QUARTER,

November and December, 1901, and January, 1902.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., January 10, 1902.

Present, Drs. Forrest, Davis, Cook, Wishard and Hurty.

President Forrest called the meeting to order at 10 a. m.

The minutes of the meeting held October 11, which was the regular quarterly meeting of the Board for the third quarter of 1901, were read and approved.

Minutes of special meeting held October 24 were read and approved.

The Secretary's report for last quarter was read, report was adopted and ordered spread of record.

SECRETARY'S REPORT FOR QUARTER.

During the quarter 3,034 letters were received, and counting bulletins and circulars, over 10,000 pieces of matter were mailed.

The Secretary at his own expense, analyzed 31 waters, 14 samples of sputum, 17 diphtheria cultures and 2 samples of milk. This was done in an effort to advance the sanitary interests of the State.

Sixteen visits were made by the Secretary during the quarter ending December 31, 1901, as follows:

October 9. Lafayette, to attend the Farmers' Institute, and make an address on "Sanitation and the Work of the State Board of Health."

October 14. Vincennes, on account of summons to attend court in trial of Vincennes Water Co. vs. The Vincennes Distilling Co.

October 16. Knightstown, on account of pollution of Montgomery Creek, by Knightstown Strawboard Co.

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October 21. Anderson and Muncie, with Dr. Forrest, to investigate stream pollution.

October 23. Shelbyville, on account of diphtheria.

October 28. Shelbyville, on account of inspection of school children in room No. 1, where diphtheria had originated.

November 1. Lafayette, on account of smallpox.

November 4. Lafayette, on account of invitation of President Stone, of Purdue University, to address the students on the importance of vaccination.

November 6. Vincennes, account of court summons, to attend trial of Vincennes Water Co. vs. Vincennes Distilling Co.

November 12. New York, on account of special sanitary meeting of the New York Academy of Medicine, and to read a paper by special invitation upon car sanitation.

November 18. Lafayette, account of smallpox in West Lafayette.

November 25. Williamsport, on account of urgent invitation from city authorities to confer with them concerning contemplated sewers.

November 29. Bedford, to attend Teachers' Institute, and deliver an address upon "Sanitation and the Work of the State Board of Health."

November 30. Rushville, on account of summons to attend court in a State case.

December 7. Muncie, on account of meeting of Delaware County Medical Society, having been invited to deliver an address upon "Food and Drug Adulteration."

December 18. Plainfield, account of State Dairy Association, having been invited to deliver an address upon "What the State Board of Health Had Done to Enforce the Pure Food Law."

Full detailed accounts of each one of these visits are herewith presented.

LAFAYETTE.

On October 9 I went to Lafayette to attend the annual meeting of the "Workers in Farmers' Institutes." At this meeting the various individuals engaged in institute teaching gathered together to confer for the purpose of improving themselves in the duties which they have undertaken. The meeting lasted for two days, but I attended only one day. There were four addresses delivered in addition to the usual routine society proceedings. These addresses related to how institutes should be conducted, and how the various teachers should present the matter which they have in hand. The meeting was a profitable one and I received several good ideas as how to better present the health cause at the Farmers' Institutes which I might be invited to address.

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VINCENNES.

On October 14 I went to Vincennes on account of summons to court in the trial of the Vincennes Water Co. vs. The Vincennes Distilling Co. This is an old suit which has been reported upon heretofore. It will be remembered that in 1898 I went to Vincennes, made a survey of Wabash River, where it is polluted by the Vincennes Distilling Co., and traced by inspection and by sanitary water analyses, pollution from the distillery to the water supply. This visit turned out to be entirely unnecessary, for on account of some difficulty, the case was postponed. I took advantage of my presence in Vincennes to call upon the City and County Health Officers, to visit the jail, and to advise with said officers in regard to sewers in the city of Vincennes, and also in regard to several minor nuisances.

KNIGHTSTOWN.

On October 16 I went to Knightstown on account of invitation from the authorities of the place to investigate the pollution of Montgomery Creek by the Knightstown Strawboard Co. I found the Strawboard Company in question was a very small affair compared to some of the large works in the State. Its total product was not to exceed ten tons of strawboard per day. All of the waste was allowed to run into Montgomery Creek, and as this creek is small, it had, without question, produced a nuisance. The complaint was from one farmer only, and the authorities of Knightstown were strongly in favor of the strawboard works. I met the farmer, Mr. Morris, who had made the complaint, and also the strawboard authorities, the Chairman of the Town Board, and the Health Officer at Knightstown. We talked the matter over and all agreed that if the Strawboard Company would build depositing ponds, one of them to be a filtering pond, with a gravel bottom, underlaid with tile, and would only permit the filtered liquor to run into the stream when the water was low, that all complaints would be removed. The owners of the Strawboard Company promised faithfully to do this and by the report of Captain Anderson, which is included herewith, it will be seen that they performed their promises, and that all is now satisfactorily settled.

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ANDERSON AND MUNCIE.

On October 21 I visited Anderson and Muncie in company with Dr. Forrest, to investigate stream pollution. At Anderson, together with Dr. Forrest, I rode to the American Strawboard Co.'s plant and we made inspection of the liquors discharged into White River. We found that the company was discharging something like 1,000,000 gallons of wash water into the stream daily, and that this water was carrying altogether too much refuse. Where it was discharged into the stream, decided unsanitary conditions were produced, and it will be remembered that on account of verbal report to this effect, the permit to discharge waste water into White River, which was formally issued to the American Strawboard Co., at Anderson, was revoked.

From Anderson, we went to Muncie by trolley, and there made inspection of the Muncie Pulp Mill, and the condition of Buck Creek, below the mill. We found that Buck Creek, below the mill, was badly clogged, being filled up with strawboard refuse. The stream was shallow and the water contained therein was of a yellow color, and fermentation of the deposits in the stream was very apparent. The deposits which clogged the stream and which undoubtedly made a pronounced nuisance, was composed of wood pulp, which must have proceeded from the Muncie Pulp Co.'s works. We found upon inspection of the works themselves, that owing to the introduction of new processes, pulp was not now being discharged into Buck Creek. We found further, that the permit of the State Board of Health was being exactly complied with. The wash waters from the mill, containing almost no pulp at all, was first discharged into a pond, covering about one and one-half acres. From this pond the overflow is allowed to flow into the creek by means of a weir. A handkerchief held in the stream which flows over the weir, fails to catch any pulp, but the water itself is slightly colored with the resin from the wood which is washed by it. It was our conclusion that the Muncie Pulp Mill, at the time of our visit, was following fully and completely the permit of the State Board of Health, and was not discharging into Buck Creek any liquors or water matters of an injurious character.

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SHELBYVILLE.

On October 23, on account of urgent invitation from the city school and health authorities, I visited Shelbyville to inspect the diphtheria at that point. I found there had been one death in the family of the Superintendent of the Public Schools, Professor Tomlin, and that one of the public schools had been closed on account of the disease. The School Trustees were all present at our meeting, and requested advice as to how to proceed. I advised that the supposedly infected schoolhouse be thoroughly cleaned in every room and disinfected, and that the school be reconvened on the following Monday. At that time it was further suggested that all of the children in the schoolroom where the disease broke out, should be inspected and those found in any way ill, to be sent home. This proposition was also accepted by the School Board, and I offered to come the following Monday and, together with the City Health Officer, make the proposed inspection.

SHELBYVILLE.

On October 28 I visited Shelbyville to make inspection of the children in room No. 1, school No. 3. There are 30 children enrolled in this schoolroom; Miss Blair, teacher. The temperature of every child was taken and in 21 cases, temperature was found to be abnormal, and in two cases, the temperature was over 101. Both of these children were quite ill and by direct microscopical examination of the throat exudate, diphtheria bacilli were discovered in the throats of both of these children. They were immediately taken home by Dr. Kennedy in his buggy and full instructions given to their parents how to treat them. Four of the children were found to need bathing badly, and letters to that effect were given them to be delivered to their parents. In this inspection I found 12 children who were unquestionably very catarrhal and all of them had enlarged tonsils, and should receive treatment. It seems to me quite impossible for children to make any progress, who are sick, as was the case with these children. I have learned since this inspection that no more diphtheria has appeared.

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LAFAYETTE.

On November 1, on account of urgent telephone requests, I visited Lafayette to settle the diagnosis of several cases of smallpox which had appeared at that point. I visited four cases in all, each being at a different house, and in each instance, found it to be smallpox. In one place I found the doctor, who had been attending it, in the room unprotected in his clothing, and was, therefore, liable to carry the infection with him. He declared the case was not smallpox, and furthermore, that it was ridiculous to wear contagious disease suits in order to protect one's clothing against infection. This physician was told very plainly that he must obey the rules and the law, otherwise he would have to be placed under quarantine. He had never been vaccinated and therefore, I insisted that he submit to vaccination and to disinfect his clothes thoroughly, otherwise submit to quarantine for fourteen days. He accepted the vaccination and disinfection. I hope that he has not carried the disease to others.

LAFAYETTE.

On November 4 I again visited Lafayette on account of urgent invitation from President Stone of Purdue University, to give a talk to the students upon smallpox, and the necessity of vaccination, and also to vaccinate whoever would submit. Upon arrival I addressed a body of about 400 students, which had been convened for the purpose described above. I told them plainly that vaccination was the only prophylaxis to smallpox, described how virus is propagated, and what constitutes pure vaccine. I also gave a brief history of vaccination and explained what constitutes true vaccination. After the lecture over half of the students submitted to vaccination, in which work I was assisted by Dr. Littell, County Health Officer, and by several of the pre-medical class.

VINCENNES.

On November 6, I again visited Vincennes on account of the court summons, to testify in the case of the Vincennes Water Co. vs. The Vincennes Distilling Co. There was no postponement this time and my testimony in the matter was given. This testimony consisted essentially of what I have heretofore reported in writing to this board.

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NEW YORK.

On November 12 I visited New York City, to attend the special meeting of the New York State Railway Surgeons' Association, held at the New York Academy of Medicine. At this meeting of the above named association, the subject of car sanitation was exhaustively considered. I was invited to attend and read a paper upon the transportation of contagious and infectious diseases on railroads. My paper was well received, and will be published in the transactions of the society named. Other papers read in the symposium were: "Car Sanitation," G. B. Conn, M. D., Concord, N. H.; "Necessity of Disinfection," M. G. Rosenau, M. D., Director of Hygiene Laboratory, Washington, D. C.; "Methods of Disinfecting Cars," Wm. H. Park, M. D., Board of Health, N. Y. The general discussion was opened by W. Wyman, M. D., Surgeon-General U. S. Marine Hospital Service.

LAFAYETTE.

On November 18 I went to Lafayette on account of smallpox, which had broken out in West Lafayette. Here, again, the diagnosis was fiercely denied by certain physicians, and the town was in some confusion on account of this condition. It was to settle the question that I was called. I visited five cases of eruptive disease and found them all to be smallpox. They were promptly quarantined, and all exposed persons who could be found were vaccinated and disinfected and ordered to report to the town Health Officer within ten days after examination. Since this visit to Lafayette, which was the last of three made in October and November, the disease has steadily progressed. The Lafayette City Council refused to perform its functions as a Board of Health, as commanded to do in the statutes. The City Council absolutely refused to furnish funds for maintaining quarantine, paying physicians and the usual expenses incident to stopping smallpox. As a consequence of this neglect, the disease spread rapidly and the conditions became a threat to surrounding states. The outbreak of smallpox is attributable to Lafayette. In consequence of this condition of affairs, I informed the County Health Officer of Tippecanoe County, that in accordance with the rules of the State Board of Health, it would be the duty of the

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Secretary of the State Board of Health to take hold of the matter and manage the cases of smallpox if the city did not attend to them properly. This information was given to several business men who immediately became interested and who said they would see to it that the City Council performed its duty. At this time strong efforts are being made to stop the spread of the disease.

WILLIAMSPORT.

I visited Williamsport November 25 to confer with the town authorities in the matter of building sewers. Upon my arrival I met the Town Board and the Secretary of the County and the Secretary of the Town Board of Health. We proceeded immediately to walk over the part of town wherein it was proposed to place the sewers and also considered conditions which were in dispute and which both parties had agreed to leave to my decision. In this instance, a citizen had connected bathroom and watercloset with a flat bottom stone sewer which was intended solely for storm water and for draining cellars. Several houses were connected with this stone sewer by untrapped tile drains, and the use of the same for actual sewage purposes had produced gases and odors which had found their way through the tile drains into the cellars of the houses which were so connected. My decision was that such a sewer should not be used for transporting sewage unless all cellar drains connected therewith were thoroughly trapped, and unless the mouth of the sewer was carried further down the stream so that the sewage would not be deposited in the stream which, at times, becomes perfectly dry within the corporation of the town. The sewer system which was proposed, was carefully considered, and was approved in all except one or two minor points.

BEDFORD.

On November 29 I went to Bedford to address the Lawrence County Teachers' Institute upon the subject of school sanitation. The meeting was held in the Christian Church and there were 300 persons in attendance, the church being well filled. In my address I explained how that the ordinary schoolhouse which is ventilated by windows and doors and warmed by a stove, is unsanitary and how such a building is actually wasteful of the

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school money. I then described and illustrated how a schoolhouse should be built in order to surround the children with the very best sanitary conditions. My talk was certainly well received, and a vote of thanks was given me. During my stay in Bedford, I called upon Dr. Hunter, the County Health Officer, and also upon Dr. Freeman, the City Health Officer. Both of these gentlemen took occasion to bring up various subjects pertaining to their administration of local health affairs. These were discussed and I think satisfactorily settled.

RUSHVILLE.

On November 30 I went to Rushville on account of summons to attend court at that place in a case which concerned the State. The testimony given was altogether hypothetical, requiring no investigations or sanitary studies.

MUNCIE.

On December 7 I went to Muncie to attend the regular monthly meeting of the Delaware County Medical Society, and read a paper upon food and drug adulteration. There was a very full attendance of the society, and in my paper I gave an account of our very excellent food law, and told how necessary it was to have a laboratory before it would be possible to enforce the same. Some fifteen articles of food which were adulterated, and some seven or eight adulterated articles of drugs were accepted and explained. The society was appealed to to give its aid to securing a Laboratory of Hygiene, under the control of the State Board of Health, which laboratory would be used for enforcing the pure food law, and for making all kinds of sanitary examinations for the benefit of the public health; a resolution was passed thanking me for the paper and endorsing the recommendations I had made. The members pledged themselves to give their individual and collective aid in securing a State Laboratory.

PLAINFIELD.

On December 18 I went to Plainfield to attend the annual meeting of the State Dairy Association, and deliver an address entitled: "What Has Not Been Done to Enforce the Pure Food

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Law." In this address I fully explained that while we had one of the best food laws of any state, still there had been no enforcement of the same, because of lack of funds, and because of the necessity of a laboratory. Many questions were asked and a resolution was passed by the society to the effect that the laboratory should be established and that the State Board of Health should have an ample and proper appropriation with which to enforce the pure food law.

SMALLPOX AT CRAWFORDSVILLE.

On December 30 I received an urgent telephone message from Dr. J. N. Taylor, Health Officer of Crawfordsville, to come to that city to settle the diagnosis of certain cases of eruptive disease. Being disabled on account of lameness due to an accident on the street car, I was unable to go, and thereupon asked Dr. Chas. E. Ferguson to make the trip for me. On the morning of December 31 he went to Crawfordsville and reports concerning his visit as follows:

Upon arrival, I was met by Dr. Taylor, City Health Officer, together with Dr. Barcus, County Health Officer, and Dr. Dennis, physician. We visited the following cases: Esther Clement, just outside the city limits; Ott Williver, ——— Elmore, and James Stevens, who lived within the corporate limits. Miss Clement was not seized with the prodromal symptoms until three weeks after she had returned from Lafayette, Ind. The other three cases, in as many families, and in different parts of the city, have not been out of Crawfordsville in a number of months. The source of infection is denied, but probably proceeded originally from Lafayette. The cases are all mild and are practically convalescent. One of the newspapers, the News-Review, is in favor of suppressing the facts, but the Mayor and Council, whom I met in the evening in the regular session, did not like this stand. The Council unanimously agreed to support the City Board of Health in suppressing the disease. Drs. Taylor and Barcus are certainly most efficient and excellent officers, and should unquestionably have the confidence of the best people in their community.

REPORT OF VISIT TO SHELBY COUNTY TO INVESTIGATE CONCERNING DIPHTHERIA AND SCARLET FEVER.

Various complaining letters have been received to the effect that Dr. J. B. Stewart, Health Officer of Shelby County, had many times failed to establish quarantine and to take proper action when cases of diphtheria and scarlet fever were reported to him, and it was thought it would be right and proper to have an investi-

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gation made. Accordingly, Captain Anderson, Chief Clerk, was instructed to visit Shelby County and discover, if possible, if there was any foundation for the statements made against Doctor Stewart. Captain Anderson accordingly visited Shelby County December 7 and he reports as follows:

I visited Dr. T. C. Kennedy, City Health Officer of Shelbyville. He told me that he attended a child in the family of Mr. Phares living outside the corporation of Shelbyville about the first week in November, 1901. The child had diphtheria and the fact was reported to Dr. J. B. Stewart, by mail, but no attention was paid to the report. Quarantine was established by Dr. Kennedy by informing the people of the law which forbade them leaving their premises and mingling with other people during the prevalence of the disease. Dr. Kennedy also reported that Dr. Stewart, in company with Dr. Jones and another physician of Shelbyville, visited the child which Dr. Hurty had examined and which was proven to have diphtheria, because the diphtheria organisms were demonstrated by the miscroscope. This child, Dr. Stewart and another physician pronounced free from diphtheria and also carded the local paper to that effect.

Dr. Kennedy further said that "Dr. Stewart has never paid any attention to the cases of communicable diseases that he had reported to the said Stewart at any time." Dr. Kennedy further testified that other physicians have told him that their reports were treated in the same manner by Dr. Stewart.

Dr. Phares, of Shelbyville, had a case of diphtheria in Marion Township which he reported to Dr. Stewart, but no attention was paid to his report. I attempted to verify this statement of Dr. Kennedy's by calling upon Dr. Phares, but failed to find him. Dr. Ray, formerly of Fairland, was seen in his office. He said that his practice had been very free from epidemic diseases during the last winter. He had two cases of measles last spring when he was located at Fairland, but had quarantined them promptly and confined the disease to one family. He reported the case to Dr. Stewart, who sent him the necessary quarantine cards. Dr. Ray said that Dr. Stewart did not visit the cases or pay any attention to them.

Dr. Snyder, of Fairland, stated that he had two cases of diphtheria in the family of Jacob Helm, and one child died from the disease. The cases were reported to Dr. Stewart by telephone and he told Dr. Snyder to put up cards. Dr. Stewart did not visit the cases or pay any further attention to them. There was a small epidemic of sore throat in the town and vicinity at that time (last of October and first of November), comprising nearly fifty cases. He did not make another report to Dr. Stewart, as no attention was paid to his first report. Dr. Ray thinks that most of the cases of sore throat were really diphtheria. Dr. J. Sherfee, of Fairland, said that there had been an epidemic of tonsilitis this fall among his patients, but that he had had no cases of diphtheria. Upon my return to Shelbyville, I tried to find Dr. Phares, but failed to do so and returned to Indianapolis at 12:15 that night.

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The following letter and the reply of the Attorney-General explain themselves:

Indianapolis, November 20, 1901.

Mr. Wm. L. Taylor, Attorney-General, City:

Dear Sir—The Health Law of 1899 requires that all Health Boards "shall take prompt action to arrest the spread of infectious and contagious diseases." It also empowers the State Board of Health to pass rules for the enforcement of the act. The present rules require that infectious diseases, like smallpox, shall be quarantined by Health Officers. The quarantine is obviously for the benefit of the people, not for the afflicted person. Now the question arises: When a person is quarantined on account of smallpox or other dangerous transmissible diseases, is not, respectively, the town, if in a town, the city, if in a city, the county, if without city and town boundaries, liable for all reasonable expenses necessary for maintaining the quarantine? Respectfully,

J. N. HURTY,
Secretary.

Indianapolis, December 17, 1901.

Dr. J. N. Hurty, Secretary State Board of Health:

Dear Sir—You state that the Health Law of 1899 requires that all Health Boards "shall take prompt action to arrest the spread of infectious and contagious diseases," and that it also empowers the State Board of Health to pass rules for the enforcement of the act. You say that the present rules require that infectious diseases, like smallpox, shall be quarantined by Health Officers, and that the quarantine is obviously for the benefit of the people, not for the afflicted person, and you ask: "When a person is quarantined, on account of smallpox or other dangerous transmissible disease, is not, respectively, the town, if in a town, the city, if in a city, the county, if without city and town boundaries, liable for all reasonable expenses necessary for maintaining the quarantine?"

As a general proposition, wherever a municipal officer is required by law to discharge a particular duty on behalf of the municipality he represents, that corporation is liable for the expense necessarily incurred in the performance of the act.

It would be idle to empower a county, city or town Board of Health to establish quarantine for the purpose of the protection of the public health, were not some provision made for bearing the necessary expense of the quarantine.

It is undoubtedly the duty of the public to provide for the indigent, as well as to protect itself from contagious diseases, and the fact that a person who is not a pauper is afflicted with a contagious disease does not cast upon the public the entire charge and expense of the treatment of the disease. Only so much of this expense is cast upon the public as is necessary for its own protection. Beyond this, whatever is required for the patient should be borne by himself, if his circumstances justify it.

Generally, only the expenses necessary for the protection of the public, where a quarantine is enforced, should be borne by the public, and

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inasmuch as it is extremely difficult to establish any general rule as to what expenses are required solely for the protection of the public, and what are solely for the protection and benefit of the patient, it would be, in all cases, wise for the Health Officers, in establishing and enforcing quarantine, to arrange, in the case of counties, with the Board of County Commissioners, and, in the case of other municipalities, with the proper fiscal officers, in advance of the expenditures as to what funds might be required for the protection of the public.

I refer you to the case of Board of Commissioners of Jay County v. Fertich, 18 Ind. App. 1, which discusses this proposition at some length.

I have the honor to be, very truly yours,

WILLIAM L. TAYLOR,
Attorney-General.

SMALLPOX.

Dr. Hurty reported that he had visited the Governor, and requested that aid be given the Board from the General Epidemic Fund for the purpose of carrying on the fight against smallpox. The fact was detailed that within ten days, messages had been received from twelve different points in the State requesting aid from the State Board of Health. From each of these points the report was presented that there was difference of opinion expressed among local physicians as to whether or not the disease was smallpox. This difference of opinion and indecision on the part of the medical profession introduced demoralization into the work of prevention. It was asked that the State Board of Health send a representative to make diagnoses and settle this question, so that the local authorities could proceed with the enforcing of the rules governing such cases. The Governor announced that he would take the matter under consideration and would speedily arrive at a conclusion as to what was to be done. It was then proposed that the Board should visit the Governor upon this same subject, and, if possible, make it plainer to him and urge early action on his part. Accordingly, the Governor was called upon and the whole subject gone over again. It is very probable that permission to continue the fight against the disease will be speedily granted.

The following circular which marks the first step toward perfecting the form of death records was sent to all County Health Officers, December 10, 1901:

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OFFICIAL CIRCULAR.

Dear Sir—Notice is hereby given you as a Health Officer in the State, that commencing January 1, 1902, a new form of Certificate of Death will be used, a copy of which is enclosed. This new form is in accordance with that used by the United States and all registration States, and is adopted for the sake of uniformity. This, it is plain, will make it possible to better compare all State mortality statistics; a matter of great importance. You will cease to use the old form of certificate after January 1, 1902, and it is your duty to so inform the physicians within your jurisdiction and supply them with the new form. Direct that all old certificates be destroyed on January 1, 1902, and not used under any circumstances.

County officers will supply all city and town officers and deputies in their respective jurisdictions.

County officers must see to it that all their subordinates are supplied and that the public and medical profession are informed as to this change. The whole matter will most certainly be gladly published everywhere as news of public importance and officers should see to it that their local newspapers are fully informed of this important change.

J. N. HURTY, M. D.,
By order of the State Board of Health. Secretary.

The Trustee of Washington Township, Marion County, called at the office and reported that diphtheria had prevailed in his own and adjoining townships, and that it was his opinion that proper preventative measures had not been enforced. He asked that an investigation be made by this Board. Accordingly Captain Anderson was sent to Allisonville and Castleton to examine into the matter. His report follows:

Secretary State Board of Health: November 27, 1901.

In pursuance to your verbal instructions I visited the village of Allisonville this day, and have the honor to submit the following report:

I arrived at Castleton, the nearest station on the L. E. & W. R. R. to Allisonville, at 7:35 a. m., and called on Dr. A. Wadsworth. He reported the general health good with the exception of a few cases of the grippe; no epidemic diseases of any character in his practice or neighborhood, to his knowledge.

I found Dr. C. T. Birket, Health Officer, of Castleton, confined to his bed with appendicitis and gastralgia. He had been sick five weeks. Dr. Birket reported one death from diphtheria in his practice and that case had been quarantined and properly carded as soon as recognized. Confirmed by Dr. Wadsworth. He knew of no cases at this time. Procured a rig and drove to Allisonville, one and one-half miles west of Castleton, where I inspected the schoolhouses and premises. I found as follows, viz.:

Township Trustee, Jas. P. Johnson.

School Director, Albert Roberts.

Neither of these officers had visited the school since it was opened this fall.

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This school is under the supervision of the Health Officer, at Broad Ripple, Dr. Bates.

Name of teacher, H. A. Cummings.

The school building is brick, built in 1895, faces the east and consists of a vestibule with cloakrooms on each side and one main room. Dimensions of outside, vestibule 12x20 feet, main room 36x28 feet. The location is good, being on high rolling ground, sloping east and west from the building. It has no basement, but is built up about eighteen inches above the surface of the ground, with iron ventilators in base. The room is ventilated from the transoms and windows. Dimensions of rooms on inside: Schoolroom, 34⅛x26⅛x14 feet; cloakrooms, each about 6x10 feet; vestibule, 9x10 feet. The floors were oiled and the room seemed neat and clean.

There were two privies in the yard, back of the building, with a high tight board fence between them. They are 51 feet from the building to the front of the privies. There are four seats in each and the vault is about 4x7 feet and 6 feet deep. They were clean and no bad odor coming from them. The teacher reports that they are scrubbed and disinfected whenever needed. Carbolic solution is used for disinfecting. The building is heated by a large natural gas stove and was very comfortable. The thermometer showed 69 degrees Fahrenheit. The water is obtained from a driven well over 100 feet deep in the schoolyard southeast of the school building and has an iron pump in it. There is a small wooden trough about two feet long that catches the drip and carries it away from the well that far. It is about 130 feet from the privies and on the opposite slope of ground. The ground is high and slopes away from the schoolhouse in all directions, with a good gravel subsoil. I would consider the water supply good and wholesome. There are 36 pupils enrolled and an average attendance of 31.1.

The teacher reports one case of croup and a few colds as the extent of sickness in the school to date. There are none sick now.

The building was disinfected before school began. The building and surroundings are clean and in excellent condition. The floors are oiled and cleaned by damp sweeping. The schoolroom is nicely papered. Blackboard across the west end of a dead black. Four windows on each side and two at the east end with outside shutters to each and inside blinds on the south side. The pupils seem bright, the room well ventilated and no close smell in the room. The seats are proportioned to the age of the pupils. I talked with Ried, whose daughter, Mrs. Stoops, died of diphtheria at his house and where the disease first appeared. He says that he does not think she had the diphtheria, but that it was pneumonia which caused her death. He said that no one else took the disease from her, but also stated that the house was quarantined and after her death was thoroughly disinfected before any one was allowed to enter or leave it. Mrs. Smith's child, who now has the disease, has never been in their house since his daughter's death and has no idea as to how it contracted the disease, as the family left the village before his daughter's death and did not return until three weeks after it. Mr. Smith's house is carded. The attending physician is Dr. Bates, of Broad Ripple. Dr. Bates stated that he was unable to trace the source of infection of the Smith family. There were no other cases in Allisonville.

JAS. L. ANDERSON,
Chief Clerk Vital Statistics.

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SECOND QUARTER.

February, March and April, 1902.

SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., March 7, 1902.

Present: Drs. Forrest, Davis, Cook, Wishard and Hurty.

The meeting was called to order at 10:30 a. m.

The object of the special meeting was announced to be: To consider the report of the Board to the Governor for 1901; to consider the Michigan City situation; the smallpox situation throughout the State and also to advise the Secretary in regard to the offer to him of the position of Superintendent of the Hygiene Exhibit at the Louisiana Purchase Exposition to be held in St. Louis, Mo., in 1903.

MICHIGAN CITY.

December 27 information was received by telephone from Michigan City that a severe epidemic of winter cholera existed at that place. My informant, Dr. Tillotson, said he believed the outbreak to be due to sewage which had been introduced into the water supply. He explained there were two intakes to the waterworks, one reaching about half a mile out into the lake and another a few hundred feet, opening into the creek. The latter intake was put in as a precaution against fire, because it was known that lake intakes sometimes freeze up. In the event of the freezing of the long intake, then water could be pumped from the creek. On the 21st of December, without any warning, the engineer at the waterworks turned in the water from the creek, and within twenty-four hours, hundreds of people were prostrated

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with severe diarrhœa, attended with pain and having many of the symptoms which reminded of cholera. It was for this reason the disease was called winter cholera. Dr. Tillotson urged that the State Board of Health investigate the matter, for he declared the city authorities were wholly indifferent and did not care how many of the citizens were made sick. He also accused the city authorities of being incompetent in this matter. After this, letters were received from various citizens of Michigan City, requesting aid from the State Board of Health, all of them declaring that the local authorities seemed to have no interest in the matter and were incompetent. One of our correspondents said they were corrupt. Finally a petition was received which was dated February 19, and which is appended to this report. This petition is signed by Dr. R. W. Godfrey, the Secretary of the City Board of Health, and also by all of the physicians, save one, in Michigan City. It is also signed by many citizens. In answer to this petition I went to Michigan City February 24 to investigate the state of affairs. With Dr. Brose S. Horn, I first visited the city building and inquired for the Engineer and Mayor. The clerk in charge toid me that neither of these officials were in and that he did not know where I could find them, nor when I would be able to see them. From here I went to investigate the waterworks. From Dr. Horne and Warden Reid I learned the present works were opened in November, 1900, and had a capacity of 4,000,000 gallons per day. At the present time 2,500,000 to 3,000,000 are pumped each day. There are two 24-inch intakes; one leads into the lake, 2,800 feet from the pump-house, and the other leads to the creek, a distance of about 2,500 feet. I found the intake in the creek, where it was surrounded by rotten wooden work in a state of decay. I noticed a goodly quantity of sewage fungous growing on the wooden work in the neighborhood of this intake. A large sewer, which is the main sewer of the city and which carries all the sewage of the prison, empties into the creek, about three squares above the creek intake. The engineer informed me that the intake leading to the creek was opened Saturday, December 21, and kept open five or six days. They were compelled to open it because anchor ice filled the lake pipe.

From the works I drove up the creek to inspect the sewer. It is a large sewer, empties directly into the creek, as stated before, and

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delivers a very large volume of sewage. Near its mouth is to be seen plainly in the water an immense amount of accumulations, and sewage fungus, even at this time of the year, is found growing vigorously. I then called upon Drs. Tillotson and Blinks. Dr. Tillotson said winter cholera commenced Sunday night, December 22, on himself, wife and grandson. These were his first cases. He said water had an amber color and pronounced taste on Sunday morning. He further told me that at the car factory, in the casting foundry, all the men were taken down. He told further of a Mr. C. W. Black, employed in the casting foundry at the car works, who lives out at Eastport, and who uses well water at his home. He drank the city water at the car factory and was sick. No other members of his family were affected. Chas. Cloud, nephew of Black, presented the same history. Dr. Tillotson said he interviewed eight country people as to whether or not they had had "winter cholera." He learned in this interview that no cases had appeared in the country surrounding Michigan City, except one, and that was a girl who had been to town and drank city water. Both Drs. Tillotson and Blinks express the opinion there were at least 2,500 cases from the 21st to the 30th of December. Dr. Tillotson said he interviewed doctors as to the occurrence of winter cholera in the country, and all reported no cases. No deaths had occurred from this winter cholera. The outbreak gradually subsided, but many patients were left with gastric and intestinal disorders. Dr. Tillotson said the mains were not blown off for some days after the creek water was turned off and the lake water again introduced. Dr. Tillotson had had no cases of typhoid fever. Dr. Blinks had one case of typhoid. He made his first visit January 1, and traced it to the city water. Both Drs. Tillotson and Blinks are decidedly of the opinion the creek water in the city mains pumped into the same for several days, commencing December 21, was the cause of this outbreak of "winter cholera" and also the cause of the typhoid then prevailing.

Dr. J. B. Rogers was seen at his office, and informed me that the winter cholera first commenced in his own family. He had in all not less than thirty cases, and estimated there were not less than 2,000 cases in all. The outbreak lasted a month, the effects being somewhat lasting, leaving intestinal indigestion. Dr. Rogers expresses the positive opinion that the public water supply was the

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cause. He has had three cases of typhoid fever since the introduction of the pollution into the city mains, and three of these cases were probably due to the water.

Dr. Drescher. This lady physician told me she was thoroughly convinced that the water supply was the cause of the epidemic of winter cholera. She had not less than twenty cases, and then, on February 28, had four cases of typhoid fever. All of these patients drink city water. She had had no well-defined typhoid cases within the last year, except these just named. She expressed the opinion there were probably not less than 2,000 cases.

Dr. H. W. Wilson. This gentleman stated he had practiced medicine ten years in Michigan City, and fully believed the epidemic of winter cholera due to sewage in the public supply. All his winter cholera patients drank city water, and were taken down so suddenly after drinking it that they themselves believe it to be the cause. He had had only a few cases of well-defined typhoid in his ten years' practice, but had had two cases since which were possibly typhoid. Both of these patients drank the city water. He thinks there were over 2,000 cases of winter cholera. He says in his square the four families using water from his deep well were entirely free from the disease, and three families on the north side of his square using the public water were attacked. His horse refused to drink the water Saturday morning, February 22. Dr. Blinks, who was seen after the first interview above detailed, explained that he refused to drink the water because of the smell and was, therefore, free from an attack of winter cholera. He said the water smelled and tasted slightly of tar and gas, and he knew the gas works emptied into the sewer, and concluded, therefore, the water was polluted with sewage. No sickness like this winter cholera at the present time has existed at any time. At the factory of the King Seeding Co. the 200 employes, who are supplied with water from a deep well, were not made sick. All of these employes also drank well water, none of them being supplied with hydrant water. The 600 employes of the Hitchcock Chair Co. are supplied with deep well water, and they present the same history as those employed by the King Seeding Co.

I did not call upon Dr. W. R. Godfrey, Health Officer, because his physician told me that Dr. Godfrey was very old, very infirm

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and at that time quite ill. He also said the old gentleman could not be made to understand clearly everything that was said to him. This coming from his own physician, I thought it wise not to bother him, especially as he had signed the petition, dated February 19, which sets forth the opinion of the signers that the epidemic of typhoid fever, diarrhœa and bowel trouble which had prevailed in Michigan City was caused by introducing sewage into the public supply.

In the evening I was invited to attend a meeting of the citizens of Michigan City. I was introduced to two ministers, several attorneys and several good business men. There were also present five physicians. In this meeting the situation was thoroughly discussed, and the opinion seemed to be to the effect that the people of Michigan City were quite helpless, that they were in the hands of the officials, and they did not appreciate that a great harm had been done to the city and who seemed not to care whether disease and death entered the town. Some of the speakers used very strong language, some of the expressions being extraordinarily strong. The Rev. Mr. Wilson freely expressed the opinion that unless the State Board of Health took hold of this matter and ordered the removal of the creek intake, that the awful conditions which had just been experienced would again visit Michigan City. He said the Mayor was also secretary of the water company, and he believed that this official did not care for any other interests except his own. Being called upon to express an opinion before this meeting, I told them it was my belief that the epidemic which had been so plainly described by the physicians was due to poisons which were introduced into the water supply from the sewage-laden water of the creek. I further expressed the opinion it was to be deeply regretted that the city officials and some others did not more fully appreciate the gravity of the situation. I informed them the citizens of Michigan City had complete control, and surely could secure from the authorities everything that was necessary in the premises. While the State Board of Health undoubtedly had power, under the law, to take hold of this question, and to order the removal of the intake pipe from the creek, still I thought it would be loath to do so because the conditions did not threaten other communities or the people in the immediate neigh-

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borhood. Only the citizens of Michigan City were affected, and surely they were able to right the wrong conditions.

On February 27 a document was received, signed by E. J. Bower, an attorney of Michigan City, who was made secretary of the meeting described above. This document is appended hereto, following the petition first spoken of.

On March 4 a further document was received from the Board of Health of Michigan City, and this also is appended. I append also a letter from E. J. Bower, attorney, which follows the communication from the Michigan City Board of Health. This letter explains itself.

I recommend that it would be best for the State Board of Health not to take positive action in this matter at the present time, but to advise the local health authorities to remove, without delay, the intake of the waterworks which reaches to the creek.

Michigan City, Ind., February 19, 1902.

To the Honorable Body, the State Board of Health:

Gentlemen—

Whereas, This city is just recovering from an epidemic of typhoid fever, diarrhœa and bowel trouble, which has caused great suffering, sickness, and, in several instances, to a large proportion of the people of this city, occasioned, we believe and are fully convinced, from the use of impure and filthy water, which was, on the 21st day of December, 1901, turned in from our harbor through an emergency pipe, into the water mains of the city (through which the city receives its supply of pure water from Lake Michigan) by officers having in charge the pumping station, without notice or warning to the public, and

Whereas, The water in the harbor is polluted by sewage from the State Prison and city, into which they empty their filth and vileness, rendering said harbor water unfit for domestic use, and so long as said emergency pipe is connected with the harbor and pumping station, the same will remain a menace to the lives and public health of the citizens of this city, as it permits the waterworks officials to use said harbor water at their pleasure, hence the lives and health of the public are in constant jeopardy. Now

Therefore, We, the undersigned citizens of Michigan City, Ind., do hereby petition and pray that your honorable Board will take immediate action to compel the removal of said emergency pipe from said harbor,

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and disconnect the same from said pumping station, and thus remove said nuisance and the danger of a re-occurrence of said dread epidemic.

Respectfully submitted.

W. R. Godfrey, M. D., Secretary Board of Health, Michigan City; A. G. Tillotson, M. D., H. W. Wilson, M. D., E. G. Blinks, Jno. J. Kerrigan, M. D., J. Nelson Ledbetter, M. D., B. Rubin, M. D., M. L. Drescher, M. D., Alva Spinning, M. D., J. B. Rogers, M. D., Frank R. Warren, M. D., Whitefield Bowers, M. D., F. V. Martin, M. D., John Blackman, E. J. Wrobes, Rev. E. Sevlarzcls, William H. Wilson, R. W. Street, Henry K. Booth, Rev. J. H. Cissel, Charles H. Purdy, C. J. Robb, Henry W. Johnson, H. E. Hitchcock, A. C. Gause, E. Morris, A. N. Gittings, John M. Dunlop, N. V. Cole, C. Elliott, R. R. Nafe, E. W. Lindemann, Otto Kloepfe, Secretary L. C. Drug Association; Aug. Oppermann, C. H. Oppermann, F. M. Breckling, H. Chuby, Otto Klopsch, U. Culbert, F. A. Long, L. G. Kramer, President Laporte County Drug Association; Chas. H. Ritter, C. J. Dohn, C. A. Cline, L. L. Woods, H. A. Root, Louis H. Sieb, Mrs. Minnie Leeds, A. F. Earl, G. S. Van Deusen, J. Cassidy, Edw. J. Bower, Attorney, Wm. Ohrming, Jr., W. P. Burns, John C. Zahrn.

Michigan City, Ind., February 25, 1902.

At a meeting of the citizens of the city of Michigan City, Ind., called at 4:30 o'clock in the office of E. J. Bower, in said city, for the purpose of meeting the Secretary of the State Board of Health, Dr. J. N. Hurty, and to discuss and determine the cause of the present epidemic of typhoid fever, diarrhœa and bowel trouble, prevalent in the city, and to adopt measures to prevent a re-occurrence of the same, the following proceedings were had:

Meeting was called to order by Dr. A. G. Tillotson, and Mr. H. B. Morris was chosen Chairman, and E. J. Bower, Secretary pro tem.

The chair then called on the physicians present, for statements and opinions on the subject before the meeting, and an informal discussion followed, participated in by Drs. Tillotson, Blinks, Martin and Horne, in which they gave as their opinion, that said epidemic was caused by the use of impure and filthy water, turned into the water mains on the 21st day of December, 1901, at the pumping station in the city, through an emergency pipe connected with the harbor and said pumping station. Then followed a general discussion by the citizens present.

Dr. J. N. Hurty, Secretary of the State Board of Health, being present, was then called on for an opinion and statement of his investigation in the matter, and responded, condemning the present waterworks system, and recommending the removal of the emergency pipe connecting the harbor with the pumping station.

The Secretary then read a petition to the State Board of Health, presented and signed by about fifty of the citizens of the city, asking that

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said Board take immediate action to compel the removal of said emergency pipe, and the same was presented to the Secretary, Dr. J. N. Hurty, of said Board.

The following resolution was then passed:

Resolved, That the matter of the removal of the emergency pipe connecting the harbor and the pumping station in this city, be and the same is hereby referred to the State Board of Health, asking that said Board take immediate action to bring about the removal of said pipe, believing that the local Health Board will not act in the matter, and that this is the proper method to pursue.

Motion was then made and seconded, that Charles H. Purdy be elected permanent chairman of these meetings. Motion carried.

Motion was then made and seconded, that E. J. Bower be made permanent secretary thereof. Motion prevailed.

The chair then appointed the following named persons, as a standing committee, viz.: Dr. A. G. Tillotson, Dr. E. G. Blinks, Dr. Martin, Mr. U. Culbert, J. E. DeWolfe, Rev. Wm. H. Wilson, Rev. H. K. Booth.

Motion was then made to adjourn, to meet Friday evening, February 28, at 7:30 o'clock. Motion carried.

E. J. BOWER,
Secretary pro tem.

Michigan City, Ind., March 3, 1902.

To the Members of the State Board of Health:

Gentlemen—The members of the Board of Health of this city desire to make a plain statement in regard to the water and typhoid fever agitation which is now going on in this city, and which, we understand, is to be brought to your attention at a special meeting called by your Secretary for that purpose. It is our desire that we be heard, and inasmuch as Dr. Hurty did not visit us or the local Health Office while here, we take this as the only manner in which we can get the facts before your honorable body.

The true facts are that there is no more typhoid fever in Michigan City this winter than there was for the same period of time a year ago. From September 1, 1901, to March 1, 1902, there were seven deaths reported from typhoid conditions. Two of these were reported as tuberculosis of the bowels, one case was reported from Coolspring Township, three miles distant from the city, and two others occurred at the Prison, so that the actual number of deaths from regular typhoid in the city proper during the six months stated above was two. Now, for the same length of time there were reported to the Board a total of eighteen cases of typhoid in the city. One year ago, or from September 1, 1900, to March 1, 1901, there were reported the total of twenty cases, showing less cases reported this year with all the talk of epidemic, than there was in 1900.

This agitation regarding the typhoid situation here grew out of the fact that last December there was an epidemic of winter cholera here, and it has been said that as many as 2,000 persons were sick; but investigation shows that there was not one-third that number afflicted. About the same time the city waterworks pipe leading into the lake a half mile, and which supplies the water for the city, became clogged with ice, and

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to prevent possible destruction by fire a supply of water was drawn from the harbor until the ice could be cleared away. It is claimed further that the use of this harbor water caused the winter cholera. The local Board investigated this matter, and found a divided sentiment among the physicians. To be on the safe side in any event, the Board, two days later, adopted a resolution asking the Council to determine upon certain signals to be used by the waterworks engineers to warn people if there should be necessity for recourse to the harbor pipe again in the future. The members of the Board also took pains to ascertain if the winter cholera was entirely due to the use of this bad water, and they, as well as the physicians, found as many cases or more, among people who had not used the water than among the regular patrons of the water company. In fact, the epidemic was as general in the country round about and in the outskirts of the city beyond the water limits as it was in the downtown district, so that it is at least a mooted question whether it was the water or the peculiar atmospheric conditions prevailing at that time.

One particularly sad case which has caused all this typhoid agitation is the death on February 6 of Miss Purdy, a young lady of this city, who died while attending school at Oxford, Ohio. The circumstances attending her death have been taken as the basis of all the false reports circulated against the Board and the city. The young lady's death was certified to the Board of Health by her Oxford physician as being caused by bronchopneumonia and chronic disease of the heart, the cause of death being given as heart failure. No typhoid fever was mentioned in her case. The original report of this case is now on file in the office of Dr. Hurty, and he could have investigated this case in Indianapolis if he had desired to do so.

The members of the Michigan City Board can not understand why Dr. Hurty did not call on them to investigate the reports which brought him to this city. He never came near any one of the Board, did not visit the office of the Secretary to find out how many deaths had occurred from typhoid, or how many cases had been reported. His presence here was only learned through the local and Chicago papers after he had gone away. While the Board can survive his "snub," they do not want to rest under a pack of barefaced lies which the Secretary as the agent of the State Board was bound to investigate impartially if he would be judged as an unbiased official. He could at least have inspected the records of the Board, and then he would not have been misled into making some of the remarkable statements attributed to him by the Chicago papers.

The Michigan City Board is perfectly willing and able to meet the health conditions here, and when they can not do so, they will be glad to avail themselves of their right to call on the State Board, but if the Secretary must get busy at the beck and call of every one, he should investigate both sides of the situation, and not take the word of a few who seem desirous of magnifying an ordinary condition into one which is grossly untrue, and which does this Board and the city of Michigan City a manifest wrong.

Very respectfully,

CHARLES WALTERS, President,
C. A. KRUEGER, Treasurer,
W. R. GODFREY, M. D., Secretary,
Michigan City Board of Health.

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Michigan City, Ind., March 5, 1902.

Dr. J. N. Hurty, Secretary State Board of Health:

Dear Sir—We notice through the local paper that the local Board of Health has sent to the State Board a statement of the health condition here and in which they undertake to censure you for your acts while here, and ridicule the attitude taken by the good people of the city. We wish, however, to call the attention of the Board to the fact that the local Secretary signed the petition of the people which was presented to you and that it is our opinion that this last petition was drawn by the Mayor and presented to them for their signature.

We wish to assure you that the attitude of the people is unchanged and are willing to lend you all possible support.

Very respectfully,

E. J. BOWER.

The report for 1901 to the Governor was then taken up. Referred to a committee composed of Drs. Wishard and Hurty, with instructions to review the report as written by Dr. Hurty, to make such changes as might seem proper and then send it by mail to each member of the Board for signature.

The Michigan City matter was fully discussed and considered, and Dr. Davis offered the following:

Moved by Dr. Davis: The Secretary is directed to notify the petitioners of Michigan City that the local Health Board has ample authority to abate the condition of ill health complained of and all local resources must be exhausted before the State Board should act.

Carried.

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SECOND REGULAR MEETING FOR THE FISCAL YEAR.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., April 11, 1902.

Present: Drs. Forrest, Davis, Cook and Hurty.

The meeting was called to order by President Forrest at 10 a. m.

Minutes of the last regular meeting were read, also the minutes of the special meeting held March 7, 1902. Both were approved.

REPORT OF SECRETARY FOR QUARTER.

All of the orders issued by the last regular and special sessions have been executed. Permits and resolutions were issued.

During the months of January, February and March the office force has done extra work, which was necessary to make up the tables for 1901. I am glad to say these tables are now nearly finished, and that the rest of the copy for the report of 1901 will be ready in another week. During the quarter the Secretary, at his own expense, has done the following laboratory work:

Twenty-seven sputums examined, of which 9 were positive and 18 negative; 22 diphtheria cultures examined, of which 18 were positive and 4 negative; 14 water analyses, all but two of which showed pollution and were condemned; 4 milk analyses, 3 contained formaldehyde.

Fourteen visits were made, as follows:

January 11. Huntington, account lecture on hygiene before the Huntington County Farmers' Institute.

January 15. Lafayette and Crawfordsville, account smallpox.

January 26. Winchester, account lecture on hygiene before the Randolph County Farmers' Institute.

February 4. Veedersburg, account smallpox.

February 17. Fortville, account smallpox.

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February 18. Salem, account lecture on hygiene before Salem Farmers' Club.

February 21. Carmel, account lecture on hygiene before the Hamilton County Farmers' Institute.

March 4. Lebanon, account lecture on hygiene, by the Knights of Pythias Association.

March 8. Shelbyville, account smallpox.

March 18. Anderson, account public lecture on hygiene, under auspices of Harvey Medical Society.

March 19. Greencastle, account smallpox.

March 21. Terre Haute, account hygiene lecture before students of State Normal School.

March 25. Greensburg, account two lectures before Greensburg High School.

March 29. Batesville, account smallpox.

April 5. St. Paul, account schoolhouse inspection.

The following is a complete account of these visits:

HUNTINGTON.

On January 11 I visited Huntington on account of an invitation from the Farmers' Institute, and delivered a lecture upon "Hygiene and Sanitary Science." The said lecture was delivered in the afternoon to an audience which completely filled the opera house, and I think it met with favor, because resolutions of approval and thanks were passed. At the close of the lecture Mr. D. Burkett, a farmer living near Huntington, gave full information in regard to a nuisance in the form of a poultry house, and asked that the Health Department give him relief. Mr. Burkett was fully informed how to proceed, and I have since learned that, upon application to the County Health Board, the nuisance was abated.

LAFAYETTE AND CRAWFORDSVILLE.

On January 15 I visited Lafayette and Crawfordsville, on account of smallpox prevailing at these places. The immediate cause of going to Lafayette was the fact that the Chicago health authorities requested special information from this Board, concerning the prevalence of the disease at Lafayette, so as to determine whether or not quarantine should be established. Upon arrival at Lafayette, I waited upon the City Health Officer, Dr. Tilson, and secured a full account of the situation. He told me the City Council had refused to make an appropriation with which

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to fight smallpox and he was, therefore, compelled to do the very best he could under the circumstances. He said the physicians of the place gave their warmest support and encouragement to the work of prevention, and that at the time I was there, there were 38 cases in 13 quarantined houses. Dr. Tilson reported that he and other physicians continually recommended vaccination. Dr. Heman Spalding, representing the Chicago Board of Health, visited Lafayette the same day, but I did not meet him because I left for Crawfordsville on the train which brought him from Chicago. On account of my report of the exact conditions at Lafayette, and having expressed the opinion that no menace to Chicago existed at that point, the Chicago authorities did not establish quarantine.

At Crawfordsville I met Dr. Taylor, Health Officer of that place, also Dr. Barcus, Health Officer of Montgomery County. Dr. Taylor had requested me to come to Crawfordsville that advice and direction might be given and also confirmation of diagnoses already made. I visited five families all under quarantine and in each one typical cases of smallpox were found. Through Dr. Taylor's efforts, the city was constructing a smallpox hospital at the time I was there, and it was occupied two days later. To this hospital all cases of variola were promptly taken and vaccination was practiced whenever the individual would permit. Thorough disinfection of houses infected by the disease was also performed. Within two weeks from this time, as since learned, smallpox was completely driven out of the city of Crawfordsville.

While there I made a visit to the new abattoir. Crawfordsville and Indianapolis are the only cities in Indiana which, by special ordinance, require that animals intended for food purposes shall be slaughtered in a sanitary way. The abattoir at Crawfordsville is a model in every respect, and the city authorities deserve great praise for having established such an institution for the protection of the health of the people.

WINCHESTER.

January 21 I went to Winchester because of a special invitation from the Farmers' Institute of Randolph County, and delivered a lecture upon "Hygiene and Sanitary Science." The

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meeting was held in the court room of the courthouse and the attendance was so large that standing room could not be secured. I feel confident the lecture was appreciated and effective, because resolutions of appreciation and approval of the work of the State Board of Health were unanimously passed.

VEEDERSBURG.

On February 4 I visited Veedersburg on account of variola at that place. The Health Officer, Dr. F. A. Shoaf, had especially urged that a visit be made and advice given. On arrival at Veedersburg I found two cases of smallpox in two different families. There had been much dispute among the physicians as to the diagnosis of the disease, and it was mostly for this reason that Health Officer Shoaf called for assistance. After seeing the cases, I met the Mayor and the City Council and gave them full directions how to stop smallpox. These authorities were unanimous in their determination to stamp the disease out. I have since learned that free vaccination was offered and that rigid quarantine was placed upon every case of variola that developed, which in all amounted to three cases. The disease, therefore, did not last long in Veedersburg.

FORTVILLE.

February 17 I visited Fortville on account of smallpox at that point, and because Health Officer Stewart and the chairman of the Town Board requested that aid and advice be given. At Fortville I found 7 cases of smallpox in five families, and as usual, the local physicians were disputing as to the diagnosis. This point being settled, quarantine was established and the Board was induced to offer free vaccination to the people. I have since learned that the measures adopted proved effective, for only a very few cases developed afterwards.

SALEM.

February 18 I went to Salem to address the Salem Farmers' Club upon the subject of "Hygiene and Sanitary Science." A special invitation was extended to me and I met with the most cordial reception. The meeting was held at the house of Wm. Lindley, about four miles north of Salem. There were present 12

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men and 12 women, heads of 12 families. I enjoyed an excellent country dinner and in the afternoon delivered my paper. As usual, upon these occasions, resolutions of thanks and appreciation were offered.

CARMEL.

February 21 I visited Carmel to address the Hamilton County Farmers' Institute upon "Hygiene and Sanitary Science." The lecture was given at night in the Friend's Church, to an audience which completely filled the building. Lantern slides were used to illustrate the lecture and afterward numerous questions were asked by members of the audience. I am confident the visit to Carmel was attended with good results, for resolutions of appreciation and endorsing the work of the State Board of Health were unanimously passed. As I was compelled to stay all night, not being able to return until morning, I next day visited the Carmel school building and made a sanitary inspection. This is an eight-room brick building, built in 1887. It has no basement and is heated by large ventilating heaters. It seems in this instance, these heaters are not effective, for Dr. Hershey, Health Officer of the town, and Superintendent Retherford, stated that in cold weather the temperature of the downstairs rooms frequently fell as low as 40 degrees. The upstairs rooms were always comfortably warm and no complaint was made in regard to them. None of the rooms are properly and sufficiently lighted. The ventilation is simply by windows and doors and by means of the ventilating heaters which do not work. This schoolhouse, therefore, is not properly lighted, ventilated nor warmed, and is unsanitary. The average attendance, as reported by Superintendent Retherford, is hardly 70 per cent.

LEBANON.

On March 4 I went to Lebanon to deliver a public lecture on "Hygiene and Sanitary Science" before an audience invited by the Knights of Pythias. The meeting was held in the Knights of Pythias Hall, every seat being occupied. The lecture drew forth many inquiries from citizens in the audience, which were answered to the best of my ability.

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SHELBYVILLE.

March 8 I visited Shelbyville on account of smallpox, being invited and urged to come by Dr. Thos. Kennedy, local Health Officer and the Mayor of the city. The reason for asking help from the State Board of Health was because the County Health Officer, Dr. Stewart, had denied the existence of smallpox and the City Health Officer, Dr. Kennedy, was having very great trouble in establishing quarantine. I visited two houses where cases were under dispute and found, in both instances, well pronounced discreet cases of smallpox. My decision to that effect was given and afterward I waited upon Dr. Stewart and told him that the cases must be considered as smallpox, for they were actually so, and that he must remove his objections. Dr. Lynch, who had been employed as smallpox physician for the city of Shelbyville, told me of a case in the country which he had reported to Dr. Stewart, County Health Officer, but which had not been quarantined. Upon inquiry from Dr. Stewart I found that the accusation was true and Dr. Stewart's excuse for not establishing quarantine and enforcing the law was that he was very busy. Dr. Stewart's attention was called to the rules and also to the fact that he should perform his public duties which he had assumed, before he discharged any private business. He promised to do so hereafter and to establish quarantine promptly whenever occasion demanded.

ANDERSON.

On March 18, upon invitation from the Harvey Medical Society, which is an organization of the city physicians of Anderson, I went to that city to deliver a lecture upon "Tuberculosis and Its Prevention," in the First Methodist Church. A large audience was present. The lecture was illustrated by lantern slides and, upon its conclusion, many questions were asked by citizens in the audience, and answers given. Before the audience was dismissed, resolutions favoring the creation of a State Hospital for Indigent Consumptives and also favoring the legislation necessary for the suppression of consumption, were introduced by Dr. Norris, and were unanimously adopted by the meeting.

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GREENCASTLE.

On March 19, on account of an urgent telephone message from Dr. Preston, Health Officer at Greencastle, I went to that city to investigate some cases of smallpox, the diagnosis of which was under dispute. I visited two houses and found in each of them, typical cases of discreet smallpox. The disease was declared and quarantine was established.

TERRE HAUTE.

March 21 I went to Terre Haute upon invitation of President Parsons, of the Indiana State Normal School, to deliver a lecture upon "School Hygiene" to the students. The lecture was given in the Assembly Room of the Normal College. The audience was large, filling fully four-fifths of the hall. After the lecture many questions were asked by the pupils present, which I think indicates that some interest in the subject was aroused.

GREENSBURG.

March 25 I visited Greensburg upon invitation of Superintendent D. M. Geeting, of the Public Schools, to deliver two lectures upon "Public Hygiene." My audience was composed of the high school pupils and those of the grammar grade and filled the Assembly Hall of the high school building. My first lecture was entitled "Public Hygiene" and the second "Personal Hygiene." In order to arouse as much interest as possible among the pupils, I offered a prize of $2.00 for the best written abstract of both lectures and $1.00 for the second best written abstract of the lectures. In due time the pupils who entered the competition reported and the first prize was awarded to Miss Ethel Crume, and the second to Miss Marietta Stewart.

BATESVILLE.

March 29 I visited Batesville because of a telephone message received from Health Officer Gibson of that place. He represented that smallpox existed in the neighborhood of Batesville, which was being diagnosed as chickenpox, itch, etc., and in consequence efficient quarantine could not be established, and he feared the disease would be furthered in every direction. On arriving at Batesville

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I was met by Drs. Gibson, Eliott and Ziteke. Together we visited two families a few miles out of Batesville. In the first family, that of John Seifert, were found 6 cases of smallpox. Two of the cases were in older daughters, one being 20 years old and the other 18. Both of these cases were typical, the 18-year-old daughter having the disease confluent in various places upon her face. The four younger children, all under 10 years of age, were having the disease, but so mildly as to be almost unrecognizable, except as associated with the unquestionable cases. At the house of Mr. Homig, we found a child in the second day of the prodromal period, and an older child broken out, having passed through a marked prodromal period. As the father had unquestionably had the disease in severe form, then being in the desquamitive stage, there was no question about the cases in hand. At the house of Mr. Homig, we met six physicians of the neighborhood, two of whom, Drs. Berry and Patterson, claimed the eruptive disease was not smallpox. All of the others were agreed that smallpox was the disease in hand.

As per the order of the Board at its last meeting, I wrote to the Secretaries of the four States bounding Indiana, asking their opinion regarding the propriety of calling a meeting here at Indianapolis of the Boards of Health of Illinois, Ohio, Michigan, Kentucky and Indiana, to consider the smallpox epidemic which now so well covers the United States. Answers have been received from all as follows:

Office State Board of Health,
Springfield, Ill., April 8, 1902.

J. N. Hurty, M. D., Secretary Indiana State Board of Health, Indianapolis, Indiana:

My Dear Doctor—A conference such as suggested by you in your favor of the 5th inst. could not but be productive of good results, even though much were not accomplished. I am in favor of such a meeting, and will be very glad to attend. It would be practicable for me to be in Indianapolis any time between April 24 and May 7.

Very truly yours,

JAMES A. EGAN,
Secretary.

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Office State Board of Health,
Bowling Green, Ky., April 5, 1902.

Dr. J. N. Hurty, Secretary, Indianapolis, Ind.:

Dear Doctor—I will be very glad to attend the meeting and do anything in my power to assist you. We have the disease well in hand in Kentucky now, but have a large unvaccinated population for the disease to feed upon at every fresh importation. I am trying to have an order issued by our State Board of Education to prevent the attendance of persons at any school, as either teacher or pupil, without a certificate of recent vaccination. This would assist us greatly in the country districts, where comparatively little vaccination has been done, after four years of preaching and pleading.

Advise me of the date of the meeting as soon as it has been fixed, as I am making engagements for a lot of work.

Very respectfully,

J. N. McCORMACK,
Secretary.

Office State Board of Health.
Lansing, Mich., April 7, 1902.

J. N. Hurty, M. D., Secretary State Board of Health, Indianapolis, Ind.:

Dear Doctor—Your letter of April 5, relative to a conference of the Boards of Health at Indianapolis for the discussion of the subject of smallpox, and asking my opinion as to whether such a conference should be called, and whether I would be able to attend, has been received. Please accept very cordial thanks for it. I am of the opinion that such a conference would be a good thing, but it is doubtful that I can attend. However, I shall put the subject before the Board at its next meeting, which will occur April 11. Very respectfully,

HENRY B. BAKER,
Secretary.

P. S.—In Michigan the character of the people, and of some of the Health Officers, where smallpox gains headway, is such that they can not be reached by a campaign of education, which is really about the only way to have general vaccination. The disease is not recognized, nor reported promptly. H. B. B., Sec.

Office State Board of Health.
Columbus, Ohio, April 7, 1902.

Dr. J. N. Hurty, Secretary of State Board of Health, Indianapolis, Ind.:

Dear Doctor—Your letter of the 5th inst. relative to a smallpox conference at Indianapolis has just been received.

"There is wisdom in counsel," and I am a believer in conferences. I am not sure, however, if vaccination is our only remedy for the present epidemic (and I believe it is our only effective remedy), that anything could be said at this conference that would materially help present conditions. The warm weather is approaching, and we will no doubt have quite a

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diminution in the number of cases of smallpox. The summer time, therefore, will not be our most favorable time for urging vaccination. It is the most favorable time for quarantine measures; and, while I fear that the disease is too widely prevalent to be stamped out by quarantine measures, it is possible that by the combined effort of several States we could eradicate most of the centers of infection within our borders.

Personally, it will be difficult for me to attend a conference on account of other engagements. The principal one is my engagement with the Legislature. By this I mean that we have four or five bills, one of which is of very great moment to us, pending, which require constant watching on my part. The Legislature will probably be here until the latter part of April, and possibly the first of May. I am expecting to go to New York the first of May, to be gone for several weeks. The Legislature would not interfere if the conference were held on Saturday, or Friday afternoon and Saturday. However, our Board has a conference with the Superintendents of Schools on Friday and Saturday, April 18 and 19. We have a meeting of our Board in Cincinnati on the 23d of April, and the next day will meet with the Ohio Society for Prevention of Tuberculosis.

If the conference were held on Friday afternoon, April 25, I could, perhaps, come, and would hope that some of the members of our Board could come with me. If you call a conference, however, do not consider my plans in fixing the time. If I am unable to come, some one or more of our members would doubtless be there.

Yours truly,

C. O. PROBST,
Secretary.

ALLEN COUNTY MEDICAL SOCIETY.

The Allen County Medical Society, on January 23, held a symposium on tuberculosis. The paper of the evening was read by Dr. B. Van Sweringen, the same being discussed by many members of the Society. The Secretary, Dr. ————————, communicated these facts to the State Board of Health and sent a copy of resolutions passed unanimously by the Society as follows:

Whereas, The provision by State government of sanatoriums for the reception and care of tuberculous persons has become an acknowledged necessity for the better protection of the public against tuberculosis in its various forms, and,

Whereas, Several states already possess such sanatoriums while Indiana has taken no steps toward providing for the establishment of such an institution, therefore, be it

Resolved, First, That the Allen County Medical Society recognizes the urgent necessity for an adequate institution designed for the exclusive care and treatment, both hygienic and medical, of tuberculous persons in the State of Indiana, the said institution to be erected and maintained by the State government.

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Second, That this Society shall at once, by correspondence and otherwise, seek to enlist the active co-operation of other Medical Societies and bodies and of the public press throughout Indiana to the end that a sanatorium commensurate with the importance of the subject sought, be authorized by legislative action, the same to be erected in some suitable location in the mountainous part of the State.

Third. That copies of these resolutions be transmitted to all other Medical Societies in the State, to medical colleges, to the medical press, and the local daily press, to the Governor and members of the General Assembly; and that a persistent agitation of this subject be maintained in order that public opinion may be so influenced as to secure favorable action by the next Legislature toward the more effectual prevention and control, by approved methods, of one of the most destructive diseases to which mankind is liable.

THE MARION COUNTY MEDICAL SOCIETY.

This Society held a symposium upon tuberculosis March 18, Dr. L. C. Cline reading the principal paper. After discussion, the following resolutions were passed and the Secretary, Dr. Theodore Potter, communicated the same to the State Board of Health:

Whereas, The provision by State government of sanatoriums for the reception and care of tuberculous persons has been an acknowledged necessity for humanity's sake and for the better protection of the public against tuberculosis in its various forms; and,

Whereas, Several states already possess such sanatoriums, while Indiana, one of the live States of the Union, has taken no steps toward providing for the establishment of such an institution; therefore, be it

Resolved, That the Marion County Medical Society recognize the urgent necessity for an adequate institution designed for the exclusive care and treatment, both hygienic and medical, of tuberculous persons in the State of Indiana, the said institution to be erected and maintained by the State government.

2. That this Society shall at once, by correspondence and otherwise, seek to enlist the active co-operation of other Medical Societies and bodies, and of the public press throughout Indiana to the end that a sanatorium, commensurate with the importance of the object sought, be authorized by legislative action, the same to be erected in some suitable location.

3. That copies of these resolutions be transmitted to all other Medical Societies in the State, to medical colleges, to the medical press and to the daily press, to the Governor and members of the General Assembly; and that a persistent agitation of this subject be maintained in order that public opinion may be so influenced as to secure favorable action by the next Legislature toward the more effectual prevention and control, by approved methods, of one of the most destructive diseases to which mankind is liable.

I again suggest to the Board that consideration be given to appointing an Advisory Board of physicians of the State, said

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Advisory Board to confer and advise with the State Board of Health in regard to its public health work.

Resolved, That at the next regular meeting, that the members respectively present a detailed plan concerning the appointment, duties and character of an Advisory Council to the State Board of Health.

Dr. Davis introduced the subject of National Tuberculosis Congress which meets in New York May 14 and 15, and after full discussion the Secretary was ordered to prepare a paper, giving the statistics of Indiana in regard to tuberculosis and an account of all that has been done by the State Board of Health in the line of the prevention of this disease and to then attend the Congress and present said paper and make a full report to the Board of the meeting.

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SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., April 25, 1902.

Called to meet representatives of the Kentucky State Board of Health, and to attend the Annual Conference of the State Health Officers.

Present: Drs. Davis, Cook and Hurty. Dr. Davis presided.

There were present from Kentucky: Drs. J. N. McCormack, Secretary of the Kentucky State Board of Health, and Wm. Bailey, a member of the same. These gentlemen complained that smallpox was certainly being carried from Indiana into Kentucky and they asked that Indiana take strong action to prevent the spread of the disease and presented the following letter:

Louisville, Ky., April 25, 1902.

Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis, Ind.:

Dear Sir—Under instructions from the State Board of Health of Kentucky, Dr. Bailey and myself are on a tour of investigation of smallpox conditions in Indiana. Complaint has been made that this disease exists in nearly all of the counties bordering on the Ohio River, and that in many instances the officials of such counties are making little or no effort to protect their own citizens or the people of Kentucky. We are astonished that the disease has assumed almost epidemic proportions in nearly every part of your State, smallpox existing in 60 of the 92 counties. It will be our duty to make a full and frank report of this state of affairs to our Board, and unless prompt steps are taken to bring the disease under control, we will recommend that Kentucky establish a quarantine at the Ohio River, and that no person be permitted to cross without a certificate of recent successful vaccination, and that the person has not been recently exposed to smallpox. We will regret exceedingly to adopt measures which seem so harsh against a neighboring State, but importations of smallpox from Indiana to Kentucky have been so frequent in the past, and the expense entailed upon the municipalities and counties thereby has been so great, that we feel that justice to our own people will demand it. I think it proper to give you and the business and traveling public of Indiana full notice of

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the results of our investigations, first in the hope that such action may be taken on your side as will make quarantine unnecessary, or, failing in this, that all interested may prepare for it.

Very respectfully,

J. N. McCORMACK, M. D.,

Secretary State Board of Health of Kentucky.

The letter was received and the matter taken under advisement, after informing the gentlemen that the Indiana State Board of Health had no funds at its command to combat smallpox.

The members also attended the Annual Conference of State Health Officers on the same day, and acted with the same.

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THIRD QUARTER.

May, June and July.

SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., May 29, 1902.

Called to consider the smallpox quarantine declared by Kentucky and to confer with the Governor at his request.

Present: Drs. Forrest, Davis, Cook, Wishard and Hurty.

The meeting was called to order at 10:15 a. m., and quickly adjourned to the Governor's parlor. The quarantine proclamation of the Kentucky Board was discussed and all phases of the situation considered, and it was finally arranged that the entire Board should go to Louisville the next day, meet the Kentucky Board and see if the quarantine could not be annulled.

SPECIAL MEETING.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., June 16, 1902.

Present: Drs. Forrest, Davis and Hurty.

Called by the President to consider the smallpox situation. After deliberation the following order was made:

Ordered: The Secretary shall visit the following counties: Clay, Daviess, Sullivan, Pike and Greene, and see to it that the law and the rules regulating the management of smallpox be made effective. He shall report daily to the President as to the status of smallpox in the State as far as known. He shall also visit such other places as in the judgment of the Secretary is necessary.

Adjourned.

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THIRD REGULAR MEETING FOR FISCAL YEAR.

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., June 16, 1902.

Present: Drs. Forrest, Davis, Cook and Hurty.

Called to order by President Forrest at 11 a. m.

Minutes of the last Regular Meeting, also of the Special Meeting held April 25; also of the Special Meeting held May 29, were read and approved; also of the Special Meeting held June 16 were read and approved.

REPORT OF SECRETARY FOR QUARTER ENDING JUNE 30, 1902.

During the quarter, the Secretary made thirty-four visits, as follows:

April 6. St. Paul.
April 17. Columbus, Ohio.
April 21. Gaston.
April 24. Plainfield.
May 1. Sullivan.
May 3. Clarks Hill.
May 9. Marion.
May 20. Evansville.
May 24. Greensburg.
May 27. Louisville.
May 30. Louisville.
June 2. Evansville and Boonville.
June 3. Cannelton and Rockport.
June 4. Huntingburg and English.
June 5. Paoli.
June 6. French Lick.
June 7. Campbellsburg, Saltillo and Orleans.
June 8. Richmond.
June 10. Lafayette.
June 12. North Vernon.
June 16. Rockport.

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June 18. Petersburg.
June 19. Washington.
June 20. Bloomfield, Switz City and Lyons.
June 24. Hartford City.
June 30. Knightstown.

Full reports of these visits are given herewith:

ST. PAUL.

Upon invitation of Dr. C. L. Howard, Trustee and Health Officer, of St. Paul, I visited that place in order to confer with the officer named, in regard to the sanitary conditions of his town and in regard to the schoolhouse. On arrival, I met Dr. Howard and together we discussed the best plans for draining the town, also several minor unsanitary conditions. Finally the schoolhouse was surveyed. It was a very old structure, unfit in every way for school purposes. The inhabitants of the town were all agreed upon this point, and it was only asked that the building be condemned by the State Board of Health in order to make possible the securing of a new building. It will be quite unnecessary to here include all the details of this bad structure because it was recently consumed by fire and a new building must now be constructed.

COLUMBUS, OHIO.

The State Board of Health and Superintendents of Schools of Ohio held a special meeting on April 18-19, for the purpose of discussing questions relating to school hygiene. The Secretary was invited by the Ohio authorities to be present and take part in the discussions. There were fifteen papers read and discussed. All of these papers related purely to school hygiene. Their titles were as follows:

"How May Schoolhouse Construction be Best Regulated?"
"Essential Requirements for a Sanitary School Building."
"The Inadequate Teaching of Hygiene in the Public Schools."
"Medical Inspection of Schools."
"To What Extent is the State Morally Bound to Provide for the Physical Welfare of School Children?"
"Is there Mental Overcrowding in the Public Schools?"
"Evils of the One Session Plan for High Schools."
"Visual Hygiene in Public Schools."

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"When and How Should Schoolhouses be Disinfected?"
"How Often and in What Manner Should Schoolhouses be Cleaned?"
"School Board Constituencies."
"Should there be Physical Requirements for School Teachers?"

The meeting was exceedingly profitable and I am sure that much important knowledge was gained which I hope to put to profitable use in our State.

GASTON.

April 21. I was called to Gaston by a telephone message from the President of the Town Board of Trustees. He stated that an eruptive disease existed at that point which one doctor had pronounced to be smallpox and all the other doctors declared it not to be smallpox. Some of the cases were very severe and the people of the town were highly excited and demanded the services of the State Board of Health. As Gaston is in Delaware County, I telephoned to Dr. Cowing, Health Officer of that county at Muncie, asking him to meet me the following day at Gaston. He readily agreed to do so. Upon arrival at the town named, I met Dr. Cowing and together with Dr. Mitchell, and other resident physicians, called upon several of the eruptive cases. All of them were found to be smallpox. One case was confluent and the patient was seriously ill. The physicians who had contended the disease was not smallpox changed their opinions after full consideration of the evidence which was presented. We were then told that the disease had prevailed in that part of Delaware County since January and the total number of cases by estimate was probably in the neighborhood of 500. Dr. Cowing immediately quarantined all persons having any eruptive disorder whatever, and gave orders to the local Health Officer and the local authorities to enforce the rules of the State Board of Health governing smallpox. As usual, vaccination was urged as the only effective prophylaxis.

PLAINFIELD.

April 24. Dr. Amos Carter, by telephone, informed this office that an eruptive disease had appeared at the State Reform School for Boys, at Plainfield, and requested the advice and direction of the State Board. Upon arrival, I examined six eruptive cases

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and found them all to be smallpox. Dr. Carter had pronounced all the cases to be variola, but to make sure, wished to have his diagnosis confirmed. An abundance of vaccine was ordered purchased and vaccination and re-vaccination of every boy in the school was ordered. The six cases were isolated and the institution placed under quarantine. For three weeks no person was allowed to go in and out of the school except the physician, and to bring in the mail and the necessaries of life. I am glad to be able to report that only four more cases appeared and within three weeks the disease was entirely stamped out.

SULLIVAN.

May 1. Dr. Thixtun, Health Officer of Sullivan County, informed the State office by telephone that an eruptive disorder existed in the northern part of his county. He stated he was having trouble to convince the people that the said eruptive disorder was smallpox. He also had trouble to convince physicians of this fact. He appealed to the State Board of Health and demanded its advice and direction. Upon arrival at Sullivan, I met Dr. Thixtun, and rode with him to Shelburn. At this point eight cases of smallpox were found in eight separate houses. Two of these were very severe, and one of them, a babe, died the afternoon of the day I was there. The authorities of Shelburn were instructed as to their duties, and their willing promise secured that said duties would be fulfilled. From Shelburn we rode to Hymera. At this point five cases were found in four houses. The place is not incorporated and, therefore, is under the jurisdiction of the Trustee and came directly under the jurisdiction of the County Health Officer. Quarantine was established and all of the usual instructions and directions given. A feature of this visit was the fact that I was called upon to give a short lecture to a body of miners which were gathered together, and requested that information be given them in regard to smallpox. After my talk a number of them consented to be vaccinated, but it was first necessary for me to vaccinate myself in order to set the example. Dr. Thralls, a most efficient and excellent physician, also vaccinated himself and seconded all I said upon the subject of smallpox and its prevention.

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CLARKS HILL.

May 3. Health Officer Dr. Helfrich by telephone informed this office of the existence of an eruptive disease in his town. He stated that other physicians denied the same to be smallpox and he knew that it was smallpox. He requested aid from the State Board. On arrival, I visited five families, and found four cases of smallpox in two families, and in three of them found unquestioned chickenpox existing in very young children. The diagnosis of the Health Officer being confirmed, the local authorities immediately gave orders that the rules of the State Board of Health should be thoroughly enforced. They also empowered the Health Officer to purchase vaccine and vaccinate every person free of charge who would permit.

MARION.

May 9. Upon invitation of Professor Moore, Superintendent of Public Schools of the city of Marion, I visited that city and addressed the teachers upon the subject of "School Hygiene." Ninety teachers were present. The talk was forty-five minutes long and was most kindly received. It is my hope and belief that the health cause was advanced by this visit.

EVANSVILLE.

May 20. As Chairman of the Committee on State Medicine and Hygiene, I visited Evansville to deliver the Annual Report of said committee before the Indiana State Medical Society. The session of the Society extended over two days. Numerous papers upon medical subjects were read and discussed and the report referred to was as follows:

REPORT OF COMMITTEE ON STATE MEDICINE AND HYGIENE.

State Medicine.—The Legislature has not been in session since the last report of this committee was made, and therefore there are no changes to record in the various laws relating to State medicine. There has been some litigation in the lower courts in various parts of the State under the medical law, the pharmacy law, food law and health law, but not under the dental law. The Supreme Court has made final decisions in two instances under the medical law, in one instance under the food law, and in two instances under the health law, as follows:

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Hurley v. Eddingfield.—This case came from Montgomery County. Dr. Eddingfield was applied to to render medical service to Mr. Hurley, who proffered the usual fee. Dr. Eddingfield refused to respond, giving no reason for refusal. The suit was by the heirs of Hurley and for $10,000 damages, they alleging that Hurley's death was due to the refusal and neglect of Eddingfield. The court decided there is no obligation on the part of physicians to enter into a contract contrary to their will. In other words, physicians do not have to treat the sick unless they want to.

Baker v. Hancock.—In this case, Henry W. Baker sued Dr. George S. Hancock for damages on account of malpractice and wrong diagnosis, and is interesting as deciding the legal status of a specialist. The complaint was upon the hypothesis that Dr. Hancock did not exercise that degree of skill required of his profession. No charge of unskillfulness or lack of education was made in the complaint. In the lower court the decision was in favor of the doctor, but the Appellate Court reversed. In its judgment, the court says:

"It is averred in two paragraphs of the complaint that the appellee 'was making a specialty of the treatment of cancer, and held himself out to the public as a specialist in the treatment of said disease of cancer, by advertising in the public press, and by other public notices thereof.' A specialist, as the term is here used, is understood to mean a physician or surgeon who applies himself to the study and practice of some particular branch of his profession. Scientific investigation and research have been extended and prosecuted so persistently and learnedly that the person affected by many forms of disease is of necessity compelled to seek the aid of a specialist in order to secure the results thereof. The local doctor, in many instances, himself suggests and selects the specialist whose learning and industry have given him a knowledge in the particular line which the general practitioner, in rural communities especially, has neither time nor opportunity to acquire. Small v. Howard, 128 Mass. 131. Being employed because of his peculiar learning and skill in the specialty practiced by him, it follows that his duty to the patient can not be measured by the average skill of general practitioners. If he possessed no greater skill in the line of his specialty than the average physician, there would be no reason for his employment; possessing such additional skill, it becomes his duty to give his patient the benefit of it. The appellee, if he held himself out as a specialist in the treatment of cancer, was bound to bring to the discharge of his duty to patients employing him as such specialist that degree of skill and knowledge which is ordinarily possessed by physicians who devote special attention and study to the disease, its diagnosis and treatment, having regard to the present state of scientific knowledge. This is the degree of skill which, by holding himself out as a specialist, he represented himself to have; and it does not lie with him to assert, after securing employment and compensation on that basis, that his representation was not true. The instructions given by the court upon this subject did not correctly express the law.

"The judgment is reversed, and cause remanded, with instructions to sustain motion for a new trial, and further proceedings, consistent herewith."

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Martin v. Board of Commissioners of Montgomery County. Appellate Court, June 18, 1901.—This case is of interest to physicians, for it decides that the secretary of a county board of health can not employ physicians in the name of the county for health work, nor can he directly abate nuisances, for both of these powers belong to boards of health, and secretaries are simply executive officers. Physicians, in order to collect at law for services rendered a county, must show a valid contract with the commissioners, or must show a law providing for such services and providing compensation.

State v. Beil, 157 Ind. 25.—In this case the board of health of Bluffton had ordered, as a health measure, the school board to have all the school children vaccinated, upon penalty of exclusion from school. The school board refused to act, and mandamus proceedings were brought in the Wells County Court. E. C. Vaughan, Judge, refused to issue a mandamus, and the Supreme Court decided he erred, and commanded that the mandamus be issued. This does not decide that, since the passage of the Louttit amendment to the school law, that boards of health have power to enforce the vaccination of school children, for this discussion comes under the old law before the passage of said amendment. It will be necessary to have yet another case before the Supreme Court to settle the status of the Louttit amendment.

Isenhour v. State of Indiana.- This case was appealed from Marion County to the Supreme Court, and the judgment of the lower court was sustained. This case involved the question whether or not the Legislature could give the power to the State Board of Health to pass rules and ordinances fixing food and drug standards and specifying adulterations. In regard to this matter the court says:

"The law says the State Board of Health 'shall prepare rules and ordinances when and where necessary, regulating minimum standards of foods and drugs, defining specific adulterations, and declaring the proper methods of collecting and examining drugs and articles of food.' From this provision it is agreed that in substance this is an attempted delegation of legislative power to the State Board of Health. The obvious purpose of the provision last quoted was to commit to a body of learned and scientific experts the duty of preparing such rules, and prescribing such tests, as may from time to time, in the enforcement of the law, be found necessary in determining what combinations of substances are injurious to health, and to what extent, if at all, adulterations or deteriorations of foods and drugs may go without injuriously affecting the health of the consumer. That which is required of the State Board of Health has no semblance to legislation. It merely relates to a procedure in the law's execution for a reliable and uniform ascertainment of the subjects upon which the law is intended to operate."

PROGRESS IN SANITARY SCIENCE.

The progress of sanitary science for the past year has kept pace with previous years. The most prominent advance is the final proof in Havana, by destroying mosquitoes and their larvæ, that yellow fever may be so controlled. That yellow fever is distributed solely by insects, principally mosquitoes of a particular variety, namely, Stegomyia fasciata, has

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been further proven by exact experiments conducted in Cuba by Drs. Walter Reed, James Carrol and Aristides Agramonti. The International Sanitary Congress, in session in the city of Havana, February 15 to 20, 1902, advocated the formation of antileprosy leagues, under the patronage of the government therein represented, with the object that the people be educated in every possible way of the progress that the disease is making and the methods of preventing its increase.

The congress further advocated that knowledge concerning how malaria is propogated should be spread among the people, and especially should it be imparted to school children. It was also advocated that the American republics establish leagues against tuberculosis, similar to those existing in some of these republics and in the island of Cuba, with the object that with a united effort the propagation of the disease would be diminished.

SCHOOL SANITATION.

The medical inspection of school children for the purpose of eliminating those who are diseased, and thus prevent school epidemics, is no longer counted an experiment. Its efficacy is thoroughly proven, and it now remains for those school authorities who desire to save school moneys and promote the public happiness to install as quickly as may be the medical inspection of school children. At no place in Indiana is medical inspection of school children practiced, but there is great progress in the matter of erecting sanitary school houses. To aid all that is possible in this most important matter, the State Board of Health has had plans and specifications prepared for a one-room sanitary school house, and these are furnished free to all trustees who will accept them. At this date, 33 of these plans have been distributed. There is no need for delaying in this work, and it is therefore recommended by your committee that a law should be passed requiring that all school houses built after the going into effect of the law shall conform to all sanitary requirements, and said requirements should be carefully laid down in the law. Such a law could be made self-enforcing by simply adding a section making invalid all bills incurred by authorities in constructing buildings which did not conform to the legal requirements. The urgent necessity of such a law appears from the fact that many school houses exist where the children have their feet frostbitten while sitting at their desks, where also bad lighting and bad ventilation causes malnutrition, nervous disorders and diseases of the air passages. Probably 60 per cent. of the school houses of Indiana are so unsanitary as to cause a loss of 20 per cent. of the school moneys, inasmuch as these unsanitary buildings, through their depressing and ill-health causing influences, prevent study and progress of the pupils, and cause inefficiency in the teachers.

HEALTH OF THE STATE.

The State Board of Health now secures very accurate mortality statistics, but the morbidity statistics are as yet very imperfect. In order to secure a more or less reliable expression of the extent of illness, the State Board of Health sends each month to every county what are called dis-

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ease prevalence cards. These cards are filled and returned by health officers, and the information thus gained, taken together with the facts concerning deaths, furnish a means of determining the health of the State. In 1900 there were reported 35,453 deaths, a rate of 14.8 per 1,000. In 1901 the reports gave 36,544 deaths, a rate of 14.52. By this comparison, there being 1,091 more deaths in 1901 than in 1900, the health of the State was therefore worse in the former year than in the latter. But this is subject to error, for it is plainly possible to have an increase in total sickness with a decrease in deaths as between certain periods. In this instance, however, the morbidity data for the two years shows more sickness in 1901 than existed in 1900. The two sources of information, therefore, force the conclusion that both sickness and death were greater in 1901 than in the preceding year.

SMALLPOX.

The most prevalent, highly infectious disease since the last report to this society, excluding tuberculosis, pneumonia and diarrhoeal diseases, was variola. One year ago attention was called to the fact that many physicians were unable to diagnose atypic smallpox, and persisted in calling it chickenpox, even when it became virulent and typical among adults. It thus happens that probably as many cases of variola escaped being reported as were reported. The total number of cases reported for the twelve months ending April 30, 1902, was 8,664, or an average of 722 in each month. The total deaths reported as directly due to smallpox was 21, making only 0.24 per cent. There is much evidence pointing to the conclusion that not a few smallpox deaths were reported as due to other causes, and it is also known that many cases of smallpox were complicated with pneumonia, and so smallpox was the chief but not the immediate cause of death. For the reasons given, the real extent and mortality of this disease in Indiana will never be known; and our records must simply say, smallpox, mostly in a typical form and mild, with astonishingly low mortality, prevailed throughout the year. The disease has, however, cost the people enormously. When in severe form, which was probably in about 16 per cent. of the instances, the patient lost not less than three weeks' time, and in hundreds of instances townships have been called upon to furnish medical attendance and necessary supplies. Added to this is the loss to business on account of alarm, and also the cost of imposing quarantine and disinfection. At the lowest estimate the cost to the State in four years could not have been less than $2,000,000. With rare exceptions the health authorities have not had the support of the people in the efforts put forth to stay smallpox. In only eight counties out of the sixty-five invaded has it been possible to secure appropriations from the county councils, to be used for fighting infectious diseases. The greater proportion of cities and towns have acted promptly in furnishing means for putting out the fire, but a few, suffering from stupid government, have done nothing. The State Board of Health has been called upon for aid and direction 276 times, but it has such meager funds, and there being only one State health officer, it has only been possible to reply in most instances by letter and with a few smallpox circulars. Had a few thousand dollars

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been available for fighting smallpox when it first appeared, and had the people lent an attentive ear to wholesome preventative instructions, fully one million and a half of the two million dollars lost could have been saved.

TUBERCULOSIS.

Far worse, and far more expensive than smallpox, is the ever present "great white plague." In 1901 this disease caused 4,645 deaths. Of this number 3,364 were from the pulmonary form.

It appears that in 1900 13.07 per cent. of all deaths was from tuberculosis, and in 1901 the percentage was 12.55, or, expressing the conditions in another way, tuberculosis caused one in every 7.6 deaths in 1900, and one in every 7.9 in 1901.

A study of the mortality for 1900 and 1901 shows that deaths from tuberculosis begin to rise rapidly at 15 years of age and reach a climax at 25. From 25 to 30 it is almost equally destructive, and begins to decline at 45. The fact that the disease causes the most deaths from 20 to 25 indicates that school life, which is just over, is a causative factor. Foul air being the first and greatest cause of consumption, and as so many school rooms have foul air from lack of ventilation, it seems reasonable to believe that the schools play a not insignificant part in producing consumption.

There is no State hospital or sanatorium for consumptives in Indiana. The facts and arguments for such an institution are overwhelming. There are 1,013 townships and 95 poorhouses in the State. There is an average of two consumptive patients in each poorhouse, a total of 190. On the average there is one consumptive in each township being cared for by township relief. At the lowest estimate, therefore, there are 1,200 consumptives being cared for all the time in Indiana. Every one of the patients will die, will be buried at public expense, and will infect the house he occupies. If the deceased is a parent, children will almost certainly be left to be cared for at the public expense. If all of these were cared for at a State sanatorium, 25 per cent. would be cured and preserved to their families.

As to sex, the pulmonary tuberculosis deaths are divided as follows: Males, 1,705; females, 2,464. The percentages are: Females, 59 per cent.; males, 41 per cent. Of the females who died of pulmonary tuberculosis in 1901, 1,353 were between the ages of 15 and 35. Eighty-two per cent., or 1,109, were mothers. Counting an average of two children to each one, there was, therefore, produced by tuberculosis, in 1901, 2,218 orphans, and many of these have become public charges. This phase of the tuberculosis question is certainly most important, for the unnecessary making of orphans is bad business.

To this date no society for the prevention of tuberculosis has been organized in Indiana, but the State Board of Health, the Allen County Medical Society, the Huntington County Medical Society, the Marion County Medical Society, the Wayne County Medical Society and the Delaware County Medical Society, have all urged through official resolutions that a State sanatorium for indigent consumptives be established by law.

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TYPHOID FEVER.

Typhoid, the fifth disease, caused 1,198 deaths in 1901, and by lowest estimate there were 15,000 cases. Large as the figures are, they record an improvement over the preceding year, when there were 1,320 typhoid deaths, and at least 17,500 cases. We think it probable that this disease will continue to decrease, for the people are now quite generally alive to the fact that the infection is borne to them in water. The fact that typhoid is water-borne was at first the target of paragraphers, and the exponents of the truth were termed cranks, but now all know the truth, and, by this standard, all are cranks.

The State Board of Health each month sends to those houses which have suffered death from typhoid fever a pamphlet upon the subject, which gives an account of the cause of the disease and its prevention in plain language.

DIPHTHERIA.

The diphtheria deaths are decreasing. In 1900 this disease caused 686 deaths, and in 1901 the number fell to 554. This is a decrease of 19.2 per cent. It is likely the greater proportion of this decrease is due to the increasing use of antitoxin, but some of it is certainly due to better care of children by parents, and greater care in the schools. By ages, diphtheria was most destructive in 1901 between 5 and 10, and November was the most fatal month.

MISCELLANEOUS, 1901.

The three well known children's diseases, namely, whooping cough, measles and scarlet fever, killed a total of 491, as follows: Whooping cough, 181; measles, 161; scarlet fever, 181. The most feared of these maladies, scarlet fever, was the least fatal. Cancer as a cause of death is close to typhoid fever, as there were 1,165 deaths from cancer and 1,198 from typhoid fever. Diabetes caused 204 deaths; acute articular rheumatism 103, and anemia and chlorosis 789.

Diseases of the nervous system and organs of sense caused a total of 4,494 deaths.

Diseases of the circulatory system caused 2,328, and diseases of the digestive system caused 4,585. It is probable that less strenuousity of life would reduce the deaths from the above causes.

Lastly, "old age" caused 1,265 deaths, which is only 3.4 per cent. of the total.

GREENSBURG.

May 24. A single case of eruptive disease appeared in Greensburg, May 17. The diagnosis was in doubt and appeal was made to the State Board. Upon arrival, I met Dr. Riley, local Health Officer, who took me to see the case. It was plainly smallpox and fortunately it had been treated as such, for quarantine had been maintained and the people in the neighborhood vaccinated. I met

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the Mayor at Dr. Riley's office and urged that vaccination be practiced and free vaccination offered to the people. The Mayor promised that this should be done, and also that the rules of the State Board of Health concerning smallpox should be energetically enforced.

LOUISVILLE.

May 27. On this date I went to Louisville to meet with the Kentucky State Board of Health, to confer in regard to the quarantine which the said Board threatened to place against Indiana. The Board met in the Galt House and every courtesy was extended to me as representative of the Indiana State Board of Health. Dr. Matthews, President of the Kentucky Board, announced in effect as follows:

"Smallpox has prevailed in Kentucky for almost six years. We received our first cases from Tennessee and the far south. It has cost the state to date about $500,000 for quarantine, and an untold sum on account of disturbance of business. We have fought this disease constantly and yet it still prevails in our state. We have lately, through investigation, discovered that a great many cases have come to us from Indiana, and we have further discovered that in the southern part of Indiana the disease exists to an unusual degree. We have also discovered that the health authorities of Indiana are apparently not working as they should to control the disease. We are informed directly by the Indiana State Board of Health that the central authorities are inactive because of lack of funds. We propose to protect ourselves against invasion of the disease from Indiana, and, therefore, it is suggested that the Kentucky State Board of Health shall declare a quarantine against Indiana, the same to go into effect Sunday, June 1, 1902."

After this announcement, I was called upon to speak and in effect said:

"I do not believe that Kentucky is in any greater danger from Indiana than Indiana is from Kentucky. No doubt cases of smallpox have been received into Kentucky from Indiana, and I am very certain that many cases have come into Indiana from Kentucky. It has been announced by the Health Officer of Louis-

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ville that 70 odd cases exist at this time in his city, and he has further announced that probably 90 per cent. of the people have been vaccinated. We have it upon the word of the Health Officers of Clark and Floyd counties that no cases exist in the last named county and only three in the first named. It is true there are 21 cases in the prison, but those are not counted because they are so perfectly isolated from the world and because it is absolutely impossible for the infection to get to the outside world from the prison. Under such conditions I would say, that the people of Kentucky, especially in the neighborhood of Louisville, have not near as much to fear from Indiana as Indiana has to fear from Kentucky.

"I officially request that the quarantine proclamation proposed be not issued."

The subject was discussed by Dr. McCormack, Dr. Bailey and other members of the State Board. I was then politely informed that the Board would go into executive session and, of course, withdrew, and returned to Indianapolis. The Kentucky Board issued its proclamation which, with letter of transmittal, is given below.

On May 30th, in accordance with correspondence, Drs. Cook, Wishard and the Secretary went to Louisville to hold a conference with the State Board of Health of Kentucky to officially request that the quarantine be annulled and present ordinance to sustain our request. It will be remembered that on May 20 a special meeting had been called by the Governor and that all members were present except Dr. Cook. It was then and there agreed that this visit should be made. Upon arrival in Louisville we, in due time, met the Kentucky Board and the situation was thoroughly discussed. Dr. Wishard presented the argument on behalf of the Indiana Board and, after answering many questions, the Kentucky Board of Health went into executive session. When they reached adjournment we were informed that the date of quarantine had been postponed ten days in order to give the Indiana State Board of Health time to return and renew efforts to suppress smallpox. A special meeting was held upon the train coming home. The record of this meeting is in the form of a report to the Governor as follows:

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Indianapolis, Ind., May 30, 1902.

Hon. Winfield T. Durbin, Governor of Indiana:

Dear Sir—The Indiana State Board of Health respectfully reports that on May 30, 1902, a conference between the Kentucky State Board of Health and the Indiana State Board of Health was held at the Galt House, in Louisville, Ky. The Kentucky State Board was represented by Dr. Jos. Matthews, President, Dr. J. N. McCormack, Secretary, and Drs. Wm. Bailey and C. Mayer. The Indiana Board was represented by Dr. W. N. Wishard, Vice-President, Dr. J. N. Hurty, Secretary, and Dr. Clark Cook. The object of the conference was to consider a quarantine proclamation against Indiana, issued by the Kentucky State Board, to take effect June 1, 1902. The said proclamation was as follows:

QUARANTINE PROCLAMATION OF KENTUCKY AGAINST SMALLPOX IN INDIANA.

"Louisville, Ky., May 27, 1902.

"Whereas, This Board has reliable official information that smallpox exists in epidemic form in a majority of the ninety-two counties of the State of Indiana to the extent of some 800 or more cases, and that it exists particularly in the counties bordering on the Ohio River opposite Kentucky, and that persons with the disease, or who have been exposed to it in Indiana, are constantly coming into and spreading this loathsome disease in Kentucky, and

"Whereas, We learn, upon inquiry, that the health authorities and medical profession of Indiana have been powerless to restrict the spread of the disease for months for lack of funds, and that the fiscal authorities have persistently refused and still refuse to recognize the danger to their own citizens, or to those of other states, or to permit the use of funds especially appropriated for the suppression of such epidemics; and

"Whereas, In consequence of such divided authority and parsimony, such conditions prevail in Indiana as to constantly and seriously threaten the health, lives and business interests of the people of Kentucky, and to impose additional and wholly unnecessary burdens upon our taxpayers, without hope of present or even promise of future relief.

"Now, therefore, be it known, That the State Board of Health of Kentucky, in the exercise of authority vested in it by law, and in the solemn discharge of public duty, hereby declares and issues its proclamation of quarantine against the State of Indiana, and each of the inhabitants thereof, and establishes the low-water mark on the Indiana shore as the boundary line of such quarantine, and it hereby forbids any person from the State of Indiana to pass such quarantine line, or to enter the State of Kentucky in any other way, who does not procure and exhibit, before doing so, a certificate from some duly authorized health official of Indiana or Kentucky that such person has been successfully vaccinated within the past five years, or is otherwise immune from smallpox, and it forbids any railroad bridge, electric or other transportation company, or any steamboat, ferryboat or other public or private craft or conveyance, or any company or individual owning, operating, managing or controlling the same, or any one of them, to bring, or permit to be brought, as either passenger or em-

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ployé, any person from any point or place in Indiana to any point or place in Kentucky, who does not hold the certificate hereinbefore required: Provided, That this regulation shall not apply to passengers on through trains who do not stop over at any point in Indiana.

"The municipal and county health and civil officials of jurisdictions bordering on the Ohio River and its tributaries, or having other travel connections with Indiana, are hereby authorized and instructed to enforce the quarantine regulations herein imposed, and such additional regulations as they may deem necessary for the protection of their respective jurisdictions; and the health and police and other peace officials of such municipalities and counties are hereby made Health Inspectors for the enforcement of these regulations.

"This proclamation of quarantine shall take effect and be in force from and after noon of June 1, 1902, and until officially annulled by this Board.

"Done by order of the Board.

"J. M. MATTHEWS, M. D., President.
"J. N. McCORMACK, M. D., Secretary."

At the conference the Kentucky Board was informed that the authorities of Indiana were ready and would immediately take vigorous action to stamp out smallpox, and respectfully requested that the proclamation be annulled. After respectfully hearing our statement, the Kentucky State Board of Health went into executive session, and, in due time, presented the following as its action:

"Whereas, The Indiana State Board of Health brings an official message from the Governor of the State of Indiana that from this time on the executive officer and deputies will be in the field compelling all county and municipal Boards of Health to conduct an active campaign against smallpox, and that it will give first attention to the counties bordering on Kentucky; and

"Whereas, This Board has now and always has had full faith in both the ability and desire of the Indiana State Board of Health to protect its own people and those of other States from pestilence and feels assured that every promise above recorded will be fulfilled; therefore,

"Ordered: That the proclamation of quarantine against the State of Indiana, issued May 27, 1902, to go into effect at noon June 1, 1902, be and is hereby suspended for ten days from noon, June 1, 1902, and if, upon or before the ten days have expired, the Indiana State Board of Health gives official assurance that the epidemic is under control within their borders, the proclamation will be annulled.

[Signed.] "JOSEPH MATTHEWS, President.
"J. N. McCORMACK, Secretary."

In the light of all facts we recommend and request:

First. Inasmuch as arrangements and plans made at the beginning of the year will consume our entire appropriation, we respectfully request you to supply from the contagious disease fund means sufficient to pay the costs incident to enforcing the law relating to the suppression and control of contagious and infectious diseases.

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Second. In order to quickly and thoroughly control the epidemic, it is proposed by the State Board to issue a proclamation to all subordinate boards within whose jurisdiction smallpox exists, commanding them to proceed without delay to search out and make strong efforts to control all cases of smallpox found, and also that they shall take such steps as are proper or take such specific steps as may be required by the State Board to prevent recurrence of smallpox.

Third. We will require the State Health Officer, so far as he possibly can, to personally visit the localities which the board may select, and see to it that the State Health Law is enforced and our orders are complied with.

Fourth. If at any time it appears that it is impossible for the State Health Officer to personally visit all places requiring attention, then one or more deputies, as may be necessary, will be appointed and required to enforce the health laws and the orders of the State Board.

Fifth. We will purchase vaccine and supply the same to the State Health Officer and deputies, to be used in emergencies and under such conditions as we may deem wise.

Sixth. Itemized bills for all expenditures will be presented to the Governor for his approval and for payment.

Respectfully,

J. H. FORREST, President.
WM. N. WISHARD, Vice-President.
CLARK COOK.
T. HENRY DAVIS.
J. N. HURTY, Secretary.

The following letter, to fulfill the ideas advanced in the action of the Board and report of which immediately precedes, was sent to the officers of the following counties: Orange, Franklin, Adams, Perry, Spencer and Sullivan:

Dear Doctor—We have sent from this office a letter of instruction to your County Board of Health. The said letter has been addressed to the Auditor of your county and he will present it to the County Board of Health. The letter amounts to an order, but is most kindly and gentlemanly expressed. It tells that your Board must, without delay, enforce the law and the rules of the State Board of Health. The law is quoted as follows:

"It shall be the duty of all Boards of Health to protect the public health by the removal of causes of disease when known, and in all cases to take prompt action to arrest the spread of contagious and infectious diseases, and to abate and remove nuisances dangerous to the public health, as directed or approved by the State Board of Health, and to perform such other duties as may from time to time be required of them by the State Board of Health, pertaining to the health of the people."

Your Board is then told to formally order its Secretary to enforce the rules of the State Board and empower him to employ guards and furnish supplies when necessary and also to furnish him with a deputy if neces-

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sary. We know you are well informed as to your duties and what should be done. One thing is certain, smallpox shall be suppressed. If your Board refuses to act or if your County Council refuses to make a proper appropriation for the expenses, you must promptly inform this office, and either legal proceedings against the Boards will be instituted or else quarantine against the county by the State will be enforced. I enclose herewith a certified copy of the rules of the State Board of Health. Please preserve this certified copy very carefully, indeed. Do not let it go out of your possession and be ready to furnish it to the court if at any time it is necessary.

Let us hear from you upon receipt of this letter and if you do not understand its purport and your duties, please inform us.

Very sincerely yours,

SECRETARY.

Indianapolis, June 9, 1902.

To the ———— County Board of Health:

Gentlemen—The State Board of Health wishes to suggest as follows: At your meeting to consider what action is necessary to suppress any smallpox which might now exist or might hereafter appear in your county, that you pass an order requiring your Secretary to fully and completely enforce the rules of the State Board of Health. An estimate of what the cost might possibly be should be presented to the County Council, and that body petitioned to make the appropriation. We wish most courteously to call your attention to the commands of the law to all Boards of Health. The words of the law are as follows:

"It shall be the duty of all Boards of Health to protect the public health by the removal of causes of disease, when known, and in all cases to take prompt action to arrest the spread of contagious and infectious disease, and to abate and remove nuisances dangerous to the public health, as directed or approved by the State Board of Health, and to perform such other duties as may from time to time be required of them by the State Board of Health pertaining to the health of the people."

By formally ordering your Secretary to enforce the rules of the State Board, and empowering him to employ guards and furnish supplies when necessary, and also to furnish him with a deputy, if necessary, you will meet all the requirements of the State Board. We know that the proper way to prevent smallpox is to have every one to vaccinate, but there are many people impractical and unscientific and will not adopt this well-proven method. Nevertheless, your Board should supply pure vaccine to the County Health Officer, and to any deputies you may employ, and offer to vaccinate free of charge every one who will permit it to be done. In this way a very large number of persons will be rendered immune and will not have the smallpox, and that will be accomplishing a great deal. To make plain to you how very efficient vaccination is, we will say that the State Health Officer has repeatedly seen children who were vaccinated as a requirement to enter school, taking care of parents and older brothers and sisters who had the smallpox. The children, of course, went free from the disease.

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We further inform you that prompt and energetic action on your part must be taken as the law commands, otherwise it will be the duty of the State Board of Health to either quarantine the county which does not act or bring the matter before the courts for consideration. It would indeed be unfortunate if the State authorities were compelled to quarantine any county, and this we most exceedingly desire to avoid.

We hope this communication will be received in the kindly spirit in which it is offered.

JNO. H. FORREST, President.
J. N. HURTY, Secretary.

EVANSVILLE.

June 2. Boonville, Cannelton, Rockport, Huntingburg, English, Paoli, French Lick, Campbellsburg, Orleans.

Upon special order of the State Board of Health, I visited the above named towns in accordance with our promise to the Kentucky State Board of Health to take extra precautions against the spread of smallpox, and I insert here my full report of experience in the cities and towns named.

June 7, 1902.

To the State Board of Health:

Gentlemen—I have the honor to make a complete report of all my investigations into the smallpox situation in southern Indiana. I visited the following counties: Posey, Vanderburgh, Warrick, Spencer, Perry, Crawford, Dubois, Orange and Washington.

As heretofore reported, both Posey and Vanderburgh counties are in admirable shape. Not a case is known at the present time in Posey County, and the Health Officers there are alert and provided with ample funds and the moral support of their Boards and the people. At Evansville I met County Health Officer W. S. Pritchett, City Health Officer W. H. Gilbert, and special smallpox physician, J. H. McCutcheon. There is an arrangement between the city of Evansville and the county of Vanderburgh by which all cases of smallpox are cared for at joint expense. About three miles from Evansville a smallpox hospital has been established. It is a very large frame building and was once the county infirmary. Every facility is afforded at this place to care for all cases of smallpox. On June 2 there were nine cases in the pesthouse, seven of them to be discharged by the 4th. The three officers above named united in declaring that not less than 30 per cent. of all their cases of smallpox had come from Kentucky. Since October, 1901, the County Council of Vanderburgh County had appropriated $14,000, and there had been since that date 294 cases and no deaths.

On the afternoon of June 2 I arrived at Boonville, Warrick County. I immediately called upon Dr. T. Wright, County Health Officer, and with him called at the office of Dr. D. A. DeForest. The County Commissioners were in session and we called upon them and the subject of smallpox in Warrick County was thoroughly considered. The County Health Officer, Dr. Wright, had in the beginning reported that his Board of Health and the County Council were giving him full and satisfactory support. The

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members of the Board of Health asked many questions and in the end said they would energetically enforce every measure necessary to keep down smallpox. It was the agreed testimony of Dr. Wright and Dr. DeForest that the prevailing type of smallpox was very mild and that only a very small percentage of the cases were severe. The greatest trouble experienced was to secure reports from physicians, for many refused or neglected to report smallpox, and many, also, were unable to diagnose it, for they denied that the eruptive disease now prevailing was smallpox. It was remarked by Dr. Wright that if such physicians could make a court believe that they were conscientious in their opinion, that it would be impossible to punish them for neglect to make reports of cases of smallpox which they diagnosed as chickenpox.

I did not go to Newburg, which is a small town in Warrick County, on the Ohio River, but instead telephoned to the Health Officer, Dr. O. A. Lett, from Boonville. He emphatically stated there had not been a case of smallpox in Newburg since May, 1901. Dr. D. A. DeForest, who was sitting in the room while I was telephoning, spoke up and said: "I saw four cases in Newburg in May, with Dr. Lett. It is true that Dr. Lett would not acknowledge they were smallpox, but I have had the disease and have lived with it and I know they were smallpox." I continually find such situations as the above.

For Boonville itself, Dr. DeForest, the Health Officer, reported that smallpox first appeared in May, 1901. There had been 106 cases to date; two cases were in the city at that time, June 2. Both were in quarantine. Vaccination was not general in the town, but he had noticed it was very effective where it had been practiced. The Town Board had given good support at all times and he knew positively that he would have all the support needed in the future. In the whole county there have been, since March, 1901, 182 cases, and two deaths to June 1, 1902. The death of a well-known man at Folsomville, from confluent smallpox, made vaccination general in that locality. One of the men employed to bury the dead man had had smallpox, but on account of his exposure contracted it a second time, and the second attack was much more severe than the first. I regard conditions in Warrick County as very satisfactory.

From Boonville I went direct to Cannelton, the capital of Perry County. From the records of Dr. C. T. Hendershot, who is County Health Officer, I found there had been seven cases of smallpox reported in the county in May, and at the time of my visit, the afternoon of June 3, there were six cases. These were under quarantine and being looked after properly. Dr. Hendershot said: "The County Board of Health does not support me. The County Council appropriated $350 for health work for 1902. This was exhausted on April 1. Since then I have proceeded on my own responsibility and have incurred bills to the amount of about $100. The Auditor only laughs when he is requested to convene the Board of Health and the County Council for the purpose of considering health affairs. The County Court on May 31 acquitted Dr. F. A. Evans, of Tell City, who was charged with failing to report a case of smallpox and to which unreported case over fifty cases were traced. This failure to convict has had a demoralizing effect upon the situation." Dr. C. E. Cox, Health Officer of Cannelton, reported there was one case in the city

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in May and none on the afternoon of June 3 when I saw him. He says he has full support of the local Board and that the Mayor is deeply interested in the work and he will answer that Cannelton will always do its duty if ever smallpox appears. The city has no pesthouse. I visited the courthouse and tried to see the Auditor, Mr. Fenn, who resides at Tell City. Mr. Fenn had telephoned that he probably would not be at his office that day and no one knew where to find him. The Deputy Auditor told me he did not know of any health orders or health action taken by the County Board of Health, and it was true, as Dr. Hendershot said, that $350 had been appropriated for health work in 1902, and that it was exhausted on April 1. Not being able to find the Auditor, I called up the Prosecuting Attorney, Hon. Philip Zoercher. He promised me that he would see to it that the County Board of Health and the County Council would speedily be called together and that he would advise them, as Prosecuting Attorney, to immediately make right provisions for the enforcement of the law in regard to the suppression of infectious and contagious diseases. Mr. Zoercher is certainly in hearty sympathy with disease prevention work and I am confident that he will perform his promise and bring Perry County to right action at an early day. I left word with Dr. Hendershot, Health Officer, to report immediately when his Board acted. At Tell City, which is in Perry County, I met Dr. Wm. Cluthe, who is ex-officio Health Officer and also Dr. C. H. Mason, who is the present Health Officer. The first gentleman resigned his office April 14, "because local authorities gave no support and because of newspaper abuse and abuse of anti-vaccinationists." Dr. Mason was appointed June 1, and there was no town health record from April 14 to June 1. Dr. Cluthe was enabled to state there had not been less than seventy-six cases of smallpox in Tell City between November 25, 1901, and June 1, 1902. Dr. F. A. Evans, who, as stated above, had been acquitted in the County Court of the charge of not reporting cases of smallpox, lives in Tell City. Both Dr. Cluthe and Dr. Mason united in saying that Dr. Evans was still giving trouble and would probably continue. I proposed to Dr. Mason that we call the Town Board together and have a complete understanding. He assured me this was now unnecessary, for the recent agitation throughout the State had brought him assurances that the Town Board from now on would be very active in the suppression of smallpox and would give all funds which were necessary for that purpose. Dr. Cluthe seconded Dr. Mason in this statement, and so I did not see any of the members of the Town Board of Tell City. Dr. Mason is an active, energetic man and is deeply interested in the work he has in hand.

From Tell City I went to Troy, which town is also in Perry County. Dr. R. T. Veneman is Health Officer of Troy. He reported that not a single case of smallpox to his knowledge had occurred in Troy. He attributes this result to the fact that prompt restrictive measures were taken when the disease appeared at Tell City and at Cannelton. He has the very best support from the town authorities and promises that if smallpox invades Troy, it will be vigorously fought. These assurances of Dr. Veneman made me conclude it was altogether unnecessary to see his Board, and, as time pressed, I took the train and went to Rockport.

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I arrived in Rockport on the afternoon of June 3, and immediately called upon the County Health Officer, Dr. J. H. Johnson. He was not in his office and so I next called on Dr. J. M. Daily, Health Officer of the town. Dr. Dailey reported there were no cases of smallpox in Rockport in May. There had been thirty cases since January and none at this date, June 3. He reported further that the Town Board had not given full and satisfactory support and that he had done some up-hill work. Together with Dr. Daily, I visited Dr. E. D. Ehrman, who is a member of the Town Board. After talking the matter over thoroughly, Dr. Ehrman promised positively that as a member of the Town Board, and as also the head of the Committee on Health Affairs, that every necessary sanitary step would be taken to fight smallpox whenever it appeared in Rockport. These assurances were sufficient and I made no further investigations in regard to the town. Subsequently I found Dr. Johnson, and together with Dr. O. Baumgaertner, his deputy, discussed the situation in Spencer County. These gentlemen concurred in the statement that the County Board of Health has not given adequate support. The Board had listened to their pleadings, but at no time had it taken any special action, and the records would so show. The County Council had appropriated the salary of the Secretary and nothing more. The health service in Spencer County has certainly been more or less demoralized. Dr. Johnson, who is now at his post, left the town February 1 and did not return until the last of May. He appointed Dr. Baumgaertner as his deputy to act in his absence. There is a legal tangle as to whether or not this could be done under the law, and it may be that Dr. Baumgaertner's acts are not legal. I do not know that this has had anything to do with the non-action of the County Board of Health and the County Council. Deputy Auditor H. B. Bruner, whom I found in the Auditor's office, says to his positive knowledge the County Board of Health has taken no action in regard to suppressing contagion and that no special orders have been issued. Drs. Johnson and Baumgaertner presented the records, which show that over 200 cases of smallpox have been reported in Spencer County in the last two years. Eighty per cent. of these have been reported by the two officers named and not by the practicing physicians. "Indeed," said Dr. Johnson, "we have not had the support of the physicians. Many of them do not regard this disease as smallpox and will not report. We have spoken about the matter of prosecution to the County Attorney, but he has discouraged us and we felt it was useless to make affidavits when the County Attorney was opposed to prosecutions." It would have been impossible to call the County Board of Health together, because two of them were out of the State for a few days, and so I directed Dr. Johnson that he should demand of the Auditor, so soon as the absent members returned, that he call a meeting of both the Board of Health and the County Council, to make proper provisions for fighting smallpox. I also directed Dr. Johnson to give me proper information when the Boards were called together and also to report fully as to what was done. I have not at this date, June 7, heard from Dr. Johnson. At Lincoln City, in Spencer County, I learned from a citizen of Bradleys, who positively refused to give his name, that smallpox had existed off and on for two years in the neighborhood of Midway and Oakland. He also declared it had been at Chris-

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ney, Enterprise and Newtonville. I also know this to be true from the statement of Dr. T. Wright, of Boonville. I think the citizen of Bradleys would not give his name for fear of criticism or perhaps something worse, for he said: "I do not want to be whitecapped." From all the information gained during this trip and from letters and reports presented to the State Board of Health for the last two years, I am prepared to say that the health service in Spencer County has been badly demoralized, that the Health Board has not enforced the law nor taken any action and that the County Council has not furnished means for enforcing the law. I recommend that the authorities of Spencer County be plainly informed that unless they proceed without delay to heartily enforce the law concerning the management of infectious and contagious diseases that they be proceeded against as the statutes provide.

From Rockville I went to Huntingburg, Dubois County, arriving there at 2 a. m. In the morning I called upon Dr. G. P. Williams, Health Officer. He told me there had been two cases of smallpox in his city in April and none at that date, June 4. He said that the Town Board gave him full support. He did not want in a single particular, and that he would answer for it that "Huntingburg would fight smallpox to a finish whenever it appeared." This was, of course, sufficient assurance, so far as Huntingburg was concerned. Dr. Michaels was not in Jasper, but had gone to Petersburg on business. His deputy told me over the telephone that the County Board of Health had taken interest in health matters and had issued orders that prompt action should always be taken to suppress smallpox. He also said the County Council had appropriated all the money the Health Officer had asked for. There had been only three cases of smallpox in Jasper since January 1, and they had been promptly taken care of. There had been twelve cases in the whole county in April and only two cases in May. At Birds Eye, in January and February, there had been quite an outbreak of the disease, forty cases appearing. Prompt quarantine and vaccination of all who were exposed and disinfection had been practiced and the disease was at an end at that place before the middle of March. It is very evident that health affairs in Dubois County are in excellent condition.

From Huntingburg I went to English. There I met Dr. C. D. Luckett, who is County Health Officer. He said he had not had a case of smallpox in Crawford County in ten years. I called his attention to one which was at Marengo that very day and he said that the same had come in from Vincennes, but would be immediately sent out of the county. I also called his attention to the fact that the Kentucky authorities reported smallpox in Alton, also in Leavenworth, his county. He said he had no report in regard to it, and did not believe that it existed. Dr. Luckett said he had the full support of his County Board and that the County Council has "only appropriated my salary," and has not given a penny for disease prevention nor for fighting epidemics. He thought that vaccination is quite general and that the people are heartily in favor of doing all that is necessary to prevent infectious and contagious diseases. I asked him how he would get along without money if called upon to fight smallpox. He said he would go ahead and do what was necessary, for he was confident that the bills would be met and if they were not met

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he would pay them himself. As for the town of English, he reported that the authorities are heartily in favor of combatting smallpox and all other preventable diseases. He said further that the Town Board had called him before it and told him plainly he should look sharply after all cases of smallpox which might appear and that he should vaccinate every person free of charge who would be vaccinated. He could not tell how many he had vaccinated, but it was certainly a goodly number. He assured me it was not necessary to visit Marengo, because, as County Officer, he could report that the authorities of that place were more than willing to fight smalpox. I was a little dubious about Alton and Leavenworth, but found I could not make these two towns under at least three days on account of the distance and no railroads. Dr. Luckett promised he would look after them himself and would visit them and make report. From English I telephoned to Corydon and talked with Dr. Wm. Daniel. Health Officer of Harrison County. I have the greatest faith in Dr. Daniel, for he is certainly an intelligent and highly efficient officer. He told me there were at that time, June 4, four cases of smallpox at Ramsey, all under quarantine, and that all exposed persons had been vaccinated and directed how to deport themselves. From a recent canvass of his county he was able to say there were no other cases known. He also assured me that the County Board of Health gives him its fullest support and there is an appropriation of $500 for disease prevention for 1902. He also said that with but very few exceptions, the people and newspapers gave him hearty support. The physicians have been twice notified that they shall report all cases of eruptive disease which may come under their charge. He believes the order is being complied with, for he has been called upon to visit some very mild cases which he knew were not smallpox. He had very recently visited Lanesville, New Middleton, Mauckport, Laconia, Valley City and Cloverdale. All were incorporated towns and all had Health Officers, and in each place the authorities were fully alive to the necessity of combatting infection and contagion and had ordered their respective Health Officers to be prompt and energetic in their health work. This was very satisfactory so far as Harrison County was concerned and I did not go over to Corydon.

From English I rode to Paoli, a distance of about twenty miles. The first place I stopped was at Fargo, which is about seven miles from English, and is situated in the southern part of Orange County. At this place there is a store, two houses and an abandoned mill. The keeper of the store is named Benton Standifer. I asked him in regard to the health of the community and he said there was a little consumption and everybody about there had been having the "eetch." I asked him how long the "eetch" had prevailed and he said for over two years. He had had it himself, and, pointing to one of two girls who were standing at the counter, remarked, "She has it now." The girl started to run, but I quickly stopped her and requested that she permit me to examine her face. Her forehead showed plainly the peculiar and characteristic marks which are left by smallpox. She told me that it had been three weeks since she first broke out and that her first symptoms were a slight chill, followed with fever for two days. The marks left on the forehead were alone enough to tell what the disease had been, and the other information

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gained clinched the conclusion. In driving by the mill, which was very dilapidated, I observed through an open place five men playing cards. I left the store and went down to the mill. There I addressed the gentlemen pleasantly and talked to them about the old mill. They seemed to be pleased to give me answers. One of the men wore a soldier's hat with crossed muskets on the front. He was a soldier and had been to Cuba, and his name was Billy Cummins, being well known in that neighborhood. He was the spokesman for the group and so I asked him if he knew anything of the "eetch" which Mr. Standifer said prevailed in that community for the last two years. He replied that he had seen a great deal of it, and that he was not afraid of taking it because he was vaccinated. He did not call it smallpox, but winked when he remarked about the vaccination. I asked him to show me his vaccination, which he willingly did and it was new and characteristic. One of the men who was playing cards had a pustule upon his chin and two upon his forehead. I asked permission to examine him carefully and was able to decide that he had smallpox at that time, but did not tell him that such was the case. I then examined the others in turn and found they all had had the "eetch" and that said "eetch" was without doubt smallpox. Cummins told of a man whom they all knew, and whose name he mentioned, but I did not write it down and have now forgotten, who had the "eetch" so severely as to be in bed for over two weeks. Cummins, in telling of it, said "he was a sight—so swollen you never would have recognized him." This man, he said, was now quite recovered.

From this point I drove on eight miles to Youngs Creek, which is also in Orange County. At this place I met Dr. H. P. Meyer, who said: "There has been right smart of 'eetch' around here for a year. The people were not much sick and they did not seem to take it from each other unless they slept together." He well described the disease so that I could readily tell he had been dealing with mild smallpox. I did not enter into an argument with him upon the subject, for probably there would have been no end of it. I went over to the store and there were five middle-aged women. I asked one of the women if she had any knowledge of the "eetch" which had existed thereabout. She looked at the other women and then looked at me and said, "I ain't saw no eetch." I then asked one of the other women and got essentially the same reply. About that time Dr. Meyer walked into the store and said, raising the head of the woman I first spoke to, "This woman had the 'eetch' I told you of." She was covered with confusion, but I did not take advantage of it more than to ask her how long she was sick. She said that she had not been sick at all, but after close questioning I brought out the fact that she had felt badly for two days and could not eat on account of a sick stomach. On the third day she broke out with pimples and then felt better. She had been over the attack for fully ten days and there were only left a very few marks upon her forehead. On my way from Youngs Creek to Paoli I stopped at two farmhouses, making inquiry of the occupants, but without discovering any positive and unquestionable evidences of the existence of smallpox.

Arriving at Paoli I immediately called upon Dr. C. L. Boyd, Health Officer. He greeted me very cordially and said: "I have just answered

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a telegram from Governor Durbin, asking about smallpox in my county." I immediately inquired, "What did you say?" and he replied, "I told him, no smallpox reported in Orange County." I then remarked that he should correct his statement, for I had found one case at Fargo and had discovered unquestioned evidence, proving that a great deal of smallpox had existed in the region through which I had passed. I also asked him what he knew of Northwest Township, and he told me that smallpox had been up there, he was quite satisfied, but he had not visited the region and only knew from a few reports he had received. He said he had told Dr. Purkhiser, who wrote him upon the subject, that he did not know of any smallpox. I closely scanned the face of every person I passed in Paoli, but did not discover any one presenting any marks which would warrant closer examination. I called at the office of Drs. Lingle and Lindley, in Paoli, and found neither of them in, and did not, therefore, gain any information. I stayed all night at Paoli, and in the morning, at the courthouse, met the County Commissioners, who were in session. These gentlemen received me with the greatest courtesy and we discussed the whole situation. I told them what I had found in the southern part of their county and they were very much surprised. They asked me many questions and our conference lasted for two hours. They promised me that they would energetically and heartily enforce the rules of the State Board of Health concerning the care of infectious and contagious diseases and nothing more could be asked. Dr. Boyd had told me that his Board was always ready to give him any support he might request. The County Council had appropriated $290 for health work in 1902, and that $240 of this was for the secretary's salary and $50 for expenses. I am very certain that from this time on there will be greater vigilance in Orange County, and if smallpox comes again it will be promptly dealt with.

At 10 o'clock, on June 5, I left Paoli for French Lick, and in the afternoon at 2:30 was joined by Dr. Boyd, from Paoli. Before Dr. Boyd's arrival I had called upon Dr. Wm. E. Ryan, who said that he had not seen any eruptive cases whatever except syphilis. He was positive he knew what he was dealing with and I have no doubt that he did know. When Dr. Boyd arrived, we called on Dr. J. A. Tolliver, Town Health Officer, and talked the situation over with him. He told us that Lloyd Kimmel, who kept a store and restaurant northwest of the Wells Hotel, had called on him for some medicine to allay itching and burning. Mr. Kimmel had said that his wife had a "breaking out" and she suffered very severely. Dr. Tolliver furnished medicine, but what it was I do not know. I then said we would have to go and see and examine the patient, and accordingly we all three visited Mr. Kimmel's house. We found Mrs. Kimmel in the papular stage of smallpox. She said she "eetched" and burned all over and that she had been very sick for three days with fever, pains all over her body and nausea. She further told us that when the "breaking out" came she felt better. All of this is characteristic of smallpox and I know positively the good woman had the disease. All of the children, six in number, had had the disease; two of them were pretty well marked, and the rest bore scarcely any marks at all. The mother was the last to take it and she must have had considerable resistance,

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for she had nursed the children through their illness. Mr. Kimmel had not yet been attacked and probably will not be because he has upon his arm a characteristic scar. Said scar is at least ten years old, and I believe that vaccination has protected him this far. We inquired at the drug store and at several places and of several people if they knew of any one who was sick with a breaking out. We could not learn of any other cases, and, of course, our visits ended. That night I left French Lick for Campbellsburg by way of Orleans. It only remains to be said that Dr. Boyd is now better informed in regard to his county than ever before.

I arrived at Campbellsburg from French Lick June 5, late at night, and immediately called on Dr. S. E. Luckett, Health Officer. We also called up by telephone Dr. Purkhiser, Health Officer of Washington County, who lives at Salem. Dr. Purkhiser told me that smallpox existed in the neighborhood of Saltillo, and in that neighborhood in the northeastern part of Orange County. Dr Luckett assured me there was not a single case of smallpox in Campbellsburg at that time. He expected to be able to keep it out by quarantine and by disinfection. On June 6, in the morning, I inspected the schoolhouse at Campbellsburg, because of letters from the principal and from a merchant at that town, asking that the old unsanitary schoolhouse be condemned for the benefit of the health of the pupils. I made a thorough sanitary survey of said schoolhouse and everything pertaining thereto will be reported in detail to the State Board of Health.

By 9 o'clock I was in Saltillo. There I found smallpox in the family of Mr. S. P. Mills. There were six in the family and all had it. Mr. Mills did not believe that he had smallpox, his father, Dr. Mills, having assured him it was chickenpox. The wife of the young man was very ill and was in bed, the disease having the upper hand. Mr. Mills then said, "If this is smallpox, we have plenty of it around here, and there are many cases of the same in Orange County." I did not see Dr. Mills, because he was away from his office making a call. As he evidently does not know smallpox, an interview would probably have been of little worth.

From Saltillo I drove through Northeast Township, Orange County. The first stop was the house of Mr. John Brown. I went in and found Mrs. Brown at home. She told me her name was Mrs. Eli Brown, and my driver, Mr. W. F. Banks, of Campbellsburg, told me that there was no "Eli about it," that her name was plain John Brown, and that the woman, before marriage, was named Miss Maudlin, and that he knew her well. I can not understand why Mrs. Brown represented herself as Mrs. Eli Brown, if Mr. Banks is correct. Mrs. Brown told me that she had not had the "breaking out," but the marks upon her forehead told me plainly that she had had an eruption. A close inspection was not made because she would not permit it. At Mr. Frank Ingram's, in the same township, the whole family, three in number, had evidently had smallpox. At Mr. James Freed's, a family, six in number, all had had it very bad. This is their own testimony. Mr. John Grissom, in the same township, four in family, had all had it, recovering in May. The last house at which I inquired I met Mrs. Betty Taylor, living within about three

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and one-half miles of Orleans. She assured me she did not know of any "breaking out disease," and then she said, "I do not believe it is smallpox." How she happened not to know and yet have an opinion is a matter for wonder. Mrs. Taylor had marks on her forehead which looked very much like those left by smallpox. When asked about these marks, she would not answer. It seems established, therefore, that smallpox has existed in Northeast Township of Orange County for some time, and that the physicians, when called, have been unable to diagnose it. Fortunately, no deaths have occurred, but there have been severe cases, as was instanced in Mr. John Grissom's and Mr. James Freed's families.

Arriving at Orleans, I called on Dr. R. E. Baker, Health Officer; also upon Dr. E. D. Laughlin, ex-member of the State Board of Health. Dr. Baker told me that about Christmas a girl (could not remember her name) came from Louisville to visit Mrs. Abel Murray, wife of the hotelkeeper. The Louisville girl developed smallpox, was isolated, and the people in the house were all vaccinated, and no other cases occurred at Orleans. The Louisville girl went to Leipsic, Northeast Township, and then, shortly, many cases appeared in that township and at Saltillo. How it was that Dr. Boyd, County Health Officer, missed all of this, I do not know. Dr. Baker informed me as follows, and I took down his words and read them back to him: "My Town Health Board does not give hearty support. Last winter I had a case of diphtheria. The family was very poor. I quarantined the family and furnished them supplies, and in the end had to pay for them, as the Town Board would not do so. Most doctors do not care about health affairs, for people do not care much. We have no pesthouse. I have thought I would resign because of the antagonism and abuse which follows my efforts to help others."

At 12 o'clock I left Orleans, via Mitchell, for Indianapolis, and arrived here at 5:40 p. m. on Friday, June 6.

Respectfully submitted,

SECRETARY.

Indianapolis, Ind., June 9, 1902.

Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis:

Dear Sir—I have read with interest and satisfaction your report of the 7th inst., giving your observations and conclusions of the conditions existing in the counties of Posey, Vanderburgh, Warrick, Spencer, Perry, Crawford, Dubois, Orange and Washington as relates to smallpox. In the nine counties visited, if I figure correctly, there are 21 cases of smallpox at the present time, or at the time of your visit. My conclusion is not clear, nor is your statement, as to the number in Spencer County, which I have placed at nil; but 1 in Orange County, and none in Dubois. This is indeed a very gratifying showing. The daily reports from Dr. Ferguson are also quite satisfactory for all the counties, excepting Franklin, and I have not as yet received his final report relative to the disposition upon the part of the county authorities to assume control and eradicate the disease. During your absence I wired some thirty counties concerning the number of smallpox cases each had. None of

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these counties you were expected to visit, but, in one instance, that of Orange County, I had advice, as you mention in your report. I took occasion to write to Dr. Boyd at Paoli, informing him nicely, but firmly, that the matter must be handled promptly and effectively, or that such steps as should be deemed necessary by the State Board of Health and myself would be taken to suppress the disease in his county. I have done likewise with Franklin County, and shall today act accordingly with Spencer County. While you were in the field, I called upon Dr. Clark Cook to visit Lafayette. His report is enclosed herewith, together with the monthly report for May made by Dr. Littell, County Health Officer, and a communication addressed to you. You may please return to me the letter from Dr. Cook. I transmit to you herewith two letters from Sullivan County, which would indicate that some effective measures should be put in force immediately in that county, and I suggest that you give the matter attention at once. In all of your visits I would have you impress upon those in authority, when it shall become necessary, that the State Board of Health and myself are acting in entire accord and harmony; that our disposition and intent is to adopt such measures, even if it shall become necessary to invoke the aid of the law, looking to the eradication of smallpox at as early a date as possible; that there is no desire to create alarm, nor to do anything unseemly that might attract attention to, or injure the trade of localities, but that we are decided that smallpox must be eliminated from our State. I will this day reinforce your efforts by writing a letter to Sullivan County, and I would suggest that you visit this county, and also that you keep in close touch with the counties you have already visited, and see that such measures are adopted and carried out that will bring about the desired result. For your information, I hand you herewith a letter this day received from Dr. Cowing, of Muncie, which indicates that they are determined to do whatsoever they can to control the situation existing in that county. It is the exception in the information I have received from the counties where they are not likewise disposed, and the exceptional cases are the ones we should look after, as well as give encouraging words to those who are inclined to be up and doing at all times. With reference to Adams County: On last Friday I wrote to Dr. Davis, of the Board, asking him to visit that county. Dr. Ferguson was also requested to do likewise. So far, I have no report from either one of them. I also wrote Dr. Forrest, asking him to give immediate attention to his own county (Grant), from which report came to me that the disease was spreading slowly. I firmly believe that, in a quiet way, we may accomplish what we desire, and have the assurance that the State is rid of the disease. I have on my desk this morning a copy of a letter written by the Vice-President of your Board to Dr. J. N. McCormack, Secretary of the Kentucky State Board of Health. Some information has come to me (and which you also secured on your trip) that, in my opinion, should be conveyed to the Kentucky authorities in a nice way. That is, that several localities have been infected from Kentucky. Dr. Ferguson makes the statement that in Boone County, Kentucky, there is no quarantine; two counties in our State, Dearborn and Switzerland, make this report. You also mention a case in Orange County that came from

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Louisville. I think it would be well to apprise the authorities south of the river of the information we have derived through visits, and that it would be well for them to look to their own back yard before complaining too loudly and seriously of their neighbors. This, as I say, may be done in a way devoid of offense. It is a very serious proposition for one State to advertise to the whole nation that they propose to quarantine against a neighboring State, and especially when conditions in their own State need looking after equally as much as the State against which they contemplate such action. I repeat, it is the exception and not the rule where our people have not been alert. There have been honest differences among the profession as to the nature of the skin eruptions. I call to mind a case in French Lick. The doctors' names are mentioned, and I am advised that one of them, at least, is a high-grade physician of Rushville. They decided the case was "itch," and took it upon themselves to treat it, and in five days, it is stated to me, they had the skin clear. The patient was a servant girl in the Wells House, and she was seen on the streets by two members of my party. Doubtless Kentucky has the same confusion among its physicians.

I would suggest that you make visits to the counties of Clay, Greene, Sullivan, Daviess and Knox. The first reports 14 cases, the second 14 cases, the third 28 cases, the fourth 25, and the latter 27, since May 23. I shall write to the counties this day, reinforcing your personal efforts.

Respectfully,

WINFIELD T. DURBIN,
Governor.

Indianapolis, June 9, 1902.

Hon. Winfield T. Durbin, Governor of Indiana:

Dear Sir—I acknowledge receipt of your communication of June 9, and am thankful to know that my report was satisfactory to you. Your pardon must be asked for not stating in my report the number of cases of smallpox which the Deputy Health Officer of Spencer County stated existed in May. He stated the number was 10, and that 2 on June 3 had just been reported. I had these facts plainly written in my notes, but for some cause which I can not explain, I missed them in my report to you. As to Orange County, you will find, upon rereading, that I reported finding 2 cases, one at Fargo and one at French Lick. The letters you have from Sullivan County, and also one I have received from Mr. Law, indicate a worse condition than I supposed existed there. Dr. E. D. Thixtun, Health Officer of Sullivan County, is an active, competent and conscientious man. I was at Sullivan on May 1, and with him rode through the northeastern part of the county. We found several cases of smallpox at Sheldon, and there I witnessed one death from the disease, arriving there about ten minutes before dissolution. The patient was a child not over two years old.

From Sheldon we rode to Hymera, and there we found smallpox in the houses of five miners, one case in each house. All were placed under quarantine, and the Trustee notified to furnish supplies if they were needed. Dr. Thixtun informed me that his Board gave him no support,

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and that the County Council had not furnished any funds for fighting smallpox or other infectious diseases.

The President and Vice-President of the Board have directed that orders shall be issued to the County Boards of Health of Sullivan, Spencer and Franklin Counties that they shall proceed without delay to enforce the rules of the State Board of Health concerning the management of smallpox. Since Dr. Ferguson has reported in regard to Adams County, I will also serve the order on the officers there. The order is to be followed up with prompt action, if it is necessary to do so. These directions of the officers of the Board were not given me until after 6 p. m. on Saturday, and although I worked continuously all day Sunday, and so far today, I have not been able to get the orders out as directed, but will get the orders out yet tonight, and forward to Dr. Forrest for his signature.

I have a postal card from Dr. Hendershot, Health Officer of Perry County, informing me that his County Board of Health and the County Council have been called together and will meet on Tuesday, June 10. He says that he has the energetic support of the Prosecuting Attorney, Mr. Zoercher, and I am confident that all will go well in that county. Over the telephone, on Saturday, the Auditor of Spencer County told me he would call the County Board of Health and the County Council to meet immediately, and requested that I send typewritten instructions as to what should be done. I promised to do so, and they will go forward tonight. The Franklin County Auditor also promised, over the telephone, to call the County Board of Health and County Council together to take action for the suppression of smallpox. He did not ask for instructions, nevertheless a kindly letter will be sent, suggesting what the State Board thinks should be done.

You surely are right in thinking that I should go to Sullivan County, and I will leave here for Sullivan tomorrow night. It probably will be necessary for some one, and I would suggest Dr. Ferguson, to go to Decatur County and stay there until action is taken, or at least until full assurances of activeness will be given. I wish to say that I never yet have failed to secure action from County Boards of Health when the effort was kindly and persistent. From what Dr. Ferguson says, however, I fear action will have to be taken against the authorities in Adams County. I visited that county last fall, met the officials and plead with them to enforce the law and the rules concerning infectious diseases. The Board, I believe, would have acted at that time if it had not been that four of the prominent physicians were insistent that the disease was not smallpox. As they had several typical cases, where not a single link in the chain of evidence that they were smallpox was missing, it seems strange that these physicians should not make the correct diagnosis. They would not meet the case point to point, but would remain silent, and in the end walk away, shaking their heads. I detail all of this to make plain as possible a serious difficulty met in the field.

In regard to informing the Kentucky Board of Health that we have not a few cases from their State, I will say that Dr. Wishard will meet both the President and Secretary of that Board in Saratoga on Tuesday, and he told me he would politely inform those officials that Indiana was much indebted to Kentucky for not a little of her smallpox, and would

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cite the instances of which he has notes. It is certainly true, as you say, "a very serious proposition for one State to advertise to the whole nation that they propose to quarantine against a neighboring State, and especially when conditions in their own State need looking after equally as much as the one against which they contemplate such action."

I took essentially this ground at Louisville on May 27, when I put forth every effort to persuade the Kentucky Board not to act, as it subsequently did.

I note your suggestion that I make visits to the counties of Clay, Greene, Daviess and Knox. I am exceedingly willing to do this, and even quite anxious to go, but my desk is burdened with correspondence, and I have also on hand the analyzing and classifying of the reports and statistics for May. Knox probably needs little attention because the Health Officer at that point, Dr. Lyman Beckes, is a very efficient man, and I know positively he is fighting very hard, and that he has pretty good support from his Board. It will take at least four days to go over Clay, Greene and Daviess, and I would suggest, also, that Pike be added, for I know from correspondence that disputes exist in that county, and I presume, as usual, the eruptive disease would be found to be smallpox. All of this was presented to Dr. Wishard, and he directed that a deputy should be sent to these counties on account of the reasons detailed above, and which would make it impossible almost for me to go.

May I take this occasion in writing to deny that I have had anything to do with the partisan articles in the Indianapolis Sentinel? On Saturday over a half column was printed in that paper, for which they had not a single statement from me, as I refused absolutely to answer any of their questions. With characteristic disregard of all proprieties a great deal of matter was nevertheless "built up." I can not well express the resentment I feel for such gross misrepresentation.

I return herewith the letters concerning smallpox which were addressed to you, and which have given me valuable information.

With respect, I am, very truly yours,

SECRETARY.

Indianapolis, Ind., June 10, 1902.

Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis:

Dear Sir—Acknowledging your letter of 9th inst., and replying to that part relative to the visitations of the several counties I mentioned to you in my communication of yesterday, I think it best that your desk work should, if necessary, accumulate while you are in the field, as the conditions existing now and by reason of the action of the Kentucky Board of Health in suspending the enforcement of the quarantine until July 1, we do not want to give them an opportunity to say "we sent a boy to mill," as it were, in sending men into the field. I think it best for you to visit the counties indicated in my letter, as well as the additional one you mention—Pike County. I am just in receipt of a letter from Sullivan County, which I transmit to you for your information, after which please return to this office for file.

Very truly yours,

WINFIELD T. DURBIN,

Governor.

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Indianapolis, June 13, 1902.

Hon. Winfield T. Durbin, Governor of Indiana:

Dear Sir—Your communication of June 10 was received on the 11th, but that day I was at Lafayette. On the 12th, I was compelled to answer a subpoena to the court in Jennings County, and this is the first opportunity I have had to return reply.

The injunction case in the Tippecanoe County court, brought to prevent the city from establishing a smallpox hospital within the corporation, was finally settled by a compromise, the city promising to build a permanent pesthouse, and praying for the privilege of using an old brick residence which was available for the purpose, and which was within the city, until the new house would be ready for occupancy. The city authorities are now fully aroused to the situation. The City Health Officer has been commanded to be active in disease prevention work, and he is supplied with a deputy in the person of Dr. Washburn, who is to especially give attention to smallpox cases. The county authorities have also acted, and Dr. Littell, the County Health Officer, says that now no excuse exists for inactivity upon his part. I know that Dr. Littell understands the situation and is exceedingly willing to work. While at Lafayette I visited those houses which were quarantined for smallpox. Some of the cases were very severe, but most of them very mild. A singular fact appeared in one family which was composed of twelve persons. The father was the first to have the disease. He very likely acquired it in some of his wanderings. The older children and mother acquired the disease in due time, but the infant resisted infection for four weeks, and finally was the last to come down with the disease. We continually find many strange conditions associated with smallpox.

I note your statement that you think it best that my desk work should go unattended to for the present and that I take the field again. Just before Dr. Wishard's departure, he looked over the correspondence upon hand, and, discovering a great deal of it related to smallpox and demanded immediate answers, and also seeing plainly that the routine primary work of disease prevention was suffering, he directed that a deputy be sent to Daviess, Pike and any other counties which needed attention. These directions had been complied with before your letter was received.

Dr. Nelson Brayton is now in the field making inspections under explicit, written directions from this Board. No more competent person could be found to perform this work. A telegram was received yesterday from the Health Officer of Sullivan County, saying that $500 had been appropriated for fighting smallpox. Dr. Thixtun I know very well, and he certainly is a man well adapted for the work he has undertaken. Now that he has support, it will be but a short time before we have most favorable reports from his county.

As to smallpox during the coming months in Indiana, I wish to say: By quarantine and isolation we will be able to put it out from time to time, but it will return again and again to each locality it has visited until the greater proportion of the unprotected are attacked. This is the

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past history of the disease in every country and in every epidemic. Vaccination is the only true prophylaxis. In a word, this is the scientific and practical prevention to apply, and until it is applied we must expect repeated outbreaks of the disease. Finally, the major portion of the people will have had smallpox, and then, of course, it will depart, to return when another unprotected generation appears.

I return herewith the letter from Dr. Thixtun which you kindly submitted. Very sincerely yours,

SECRETARY.

LAFAYETTE.

June 10. On account of special request from Dr. Tilson, Health Officer of Lafayette, seconded by the request of the Mayor, I went to that city to visit some cases of eruptive disease to decide whether or not they were smallpox. On arrival, I met Dr. Tilson, and we visited in all 15 cases. Every one of the cases were unquestioned smallpox. Some of them were very severe. Lafayette had been very tardy in taking action in the line of preventing the disease. It was, therefore, necessary to meet with the City Attorney, the Mayor and the members of the health committee of the council. The necessities of the case were gone over very thoroughly and what was necessary to be done was carefully discussed. The city authorities announced they would immediately supply a pesthouse, would establish an infectious disease service, would purchase vaccine and do all things else necessary to suppress the disease.

NORTH VERNON.

June 12. I was subpoenaed by the Court of Jennings County to appear at North Vernon on the above date, in order to testify as an expert, in the case of the Seymour Water Co. vs. The City of Seymour. The questions asked were whether or not the east fork of White River, receiving sewage from many towns and refuse from many factories, was a fit source of water supply for a city or town. Further questions were asked to the effect if such water would not likely produce disease. In all, some twenty-five hypothetical questions were asked. All of this relates purely to sanitary matters, and it seems proper to state at this point, that I gave it as my opinion, and also the opinion of the State Board of Health, that the streams of Indiana in no instance furnished water which was fit for a public supply unless the same was purified by filtration.

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VISIT TO PIKE COUNTY.

To the State Board of Health: Petersburg, June 18, 1902.

I arrived at Petersburg at 10:31 a. m., Wednesday, June 18, 1902. T. W. Basinger, M. D., is County Health Officer; J. T. Kime, M. D., Town Health Officer. Dr. Basinger said: "The County Board of Health has never sat as a Board of Health, and has never issued an order as such. The County Council has appropriated my salary, but not a cent for disease prevention. A good blank book was purchased in 1899, in which to record minutes and orders of the Board, but to date only the reports and recommendations of the Health Officer are to be found therein."

Smallpox appeared at Petersburg February 14, 1901. Cases reported to date, 52, with no deaths. Dr. Basinger says: "I believe as many more occurred and were never reported. Some doctors fail to recognize smallpox, even in typical form. No orders concerning the suppression of smallpox have been issued by the Board. I have gone ahead and enforced the rules of the State Board as best I could, establishing quarantine and vaccinating all who would permit me."

Mr. W. H. Scales, Auditor of Pike County, said: "No health rules or health orders have ever been issued by the Board of Health of Pike County, and the County Council has never appropriated any funds to be used in public health work, except the salary of the Secretary." At this time there are four known cases of smallpox in the county, all under quarantine. I visited Algiers, a postoffice, five miles from Petersburg, with Dr. Basinger, and saw one case of unquestioned variola. It was in a man—Mr. Inglad. Eight in the family. The six children and wife have been vaccinated and all quarantined. I think it most probable every one in the household will be attacked, for the vaccination is probably too late. There have been seven cases at Algiers.

Dr. Basinger was directed to call a meeting of the County Board of Health next Saturday, and read them the letter of the State Board of Health as to their duties and powers, and informing them that action must be taken to enforce the rules of the State Board, and that the County Council be called together to make what appropriation seemed necessary to pay the expenses incident to suppressing infectious and contagious diseases. Dr. Basinger will promptly inform the State Board of Health as to what action is taken. The letter of the State Board sets forth plainly what must be done, and gives warning that legal action will be taken, and possibly a county quarantine enforced if the law and the rules are not enforced.

Petersburg--Dr. J. T. Kime, Health Officer: The town authorities are active and have ordered the Health Officer to go ahead, enforce the health law and rules. All bills have been promptly paid which were incurred under the order. No cases in Petersburg at this date.

Winslow--Dr. George L. Ireland, Health Officer: The Town Board has ordered energetic enforcement of the health law and the rules. No cases in Winslow at this date.

I believe there will be prompt and energetic action taken by the Pike County authorities. Will go to Washington tonight, June 18.

(Signed) J. N. HURTY,
Secretary.

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VISIT TO SPENCER COUNTY.

To the Indiana State Board of Health:

I left Indianapolis June 16, 4 p. m., via Louisville, for Rockport, arriving at Rockport 9:50 a. m., June 17, having stayed all night at Huntingburg. Upon arrival at Rockport I went immediately to the court house, and the County Board of Health was very soon called to order by President George Clements. My reception was most courteous, and I was asked to instruct the Board in its duties and to make plain what the State Board of Health wanted done. The health law was first reviewed, and next the rules of the State Board. The discussion and answering of questions lasted for two hours. The Board was not informed as to whether or not there was any money appropriated for disease prevention work. Inquiry of the Auditor discovered there was an appropriation of $165 available. Inasmuch as Dr. J. H. Johnson, the County Health Officer, had abandoned his post since February 1, I recommended the position be declared vacant, and a successor be appointed. This the Board promised to do. I also wrote out in detail my suggestions as to what special action the Board should take.

In abstract these recommendations were:

First. Order the County Attorney to promptly prosecute all physicians who failed to report the cases of contagious and infectious diseases coming under their care, also to prosecute all householders who failed to report cases in their households when a physician was not called.

Second. Order the County Health Officer to make a survey of the county and determine the exact conditions which exist, the Board to appoint one or more deputies to more quickly accomplish the work.

Third. Pass a formal order, making it of record and promulgating the same, that the health law and rules would from this time on be vigorously enforced.

Fourth. The Board to purchase at least two formaldehyde generators and a liberal amount of formaldehyde, and employ men under the direction of the Health Officer to disinfect all houses outside of towns, known to be infected with smallpox, diphtheria or scarlet fever.

Fifth. Buy some pure vaccine and offer free vaccination to every one outside of towns, the Health Officer of the county and his deputies to do the work, and to require the Health Boards of all towns to do the same for their respective towns and also require them to disinfect all infected houses within their respective jurisdictions.

Sixth. Require the County Health Officer to report in writing every Monday what he had done during the preceding seven days, this report to be recorded in a record book kept in the Auditor's office.

Seventh. Empower the County Health Officer to employ guards when quarantine could not be otherwise maintained, and for him to immediately inform the President of the Board when and where guards were employed; also empower the Health Officer to purchase supplies when the people were poor and it was necessary.

The three members promised to have all these points put in a general order by their attorney, and pass, promulgate and enforce the same. This

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was certainly all that could be asked, and I left Rockport, via Evansville, for Petersburg.

J. N. HURTY,
Secretary.

On boat Tell City, June 16, 1902.

VISIT TO DAVIESS COUNTY.

Washington, June 20, 1902.

To the State Board of Health:

I arrived at Washington, capital of Daviess County, June 18, late at night. The next morning I called on Dr. W. C. Willeford, Health Officer of Washington, and asked him to give me a report of the smallpox situation within his jurisdiction. He reported that smallpox broke out February, 1901. The first case came from Louisville, one case he also traced to Evansville, one to New Albany and several cases from Knox County, and a half dozen or more from Illinois. Since February there have been 181 cases in all, with no deaths. The disease has been almost continuously present in the city since its first appearance. The City Council had not given free support to the Health Officer's efforts to suppress the disease. He had repeatedly asked that a pesthouse be provided, and that one or more deputies be given him. To date, dependence had been placed entirely upon house quarantine, and it was very evident that this method was ineffective. I found by examining the book of ordinances of the city that a very excellent health ordinance had been passed and approved April 8, 1873. This ordinance created a Board of Health, composed of three members, chosen by the City Council. It consists of five sections, and gives absolute and complete authority to the Board of Health at any time to do what it deems necessary to prevent the spread of infectious and contagious diseases. The ordinance also gave power to establish temporary hospitals in the following words: "The City Board shall have power to select and establish such temporary hospitals as emergency may require, and report such proceedings to next regular meeting of City Council for its concurrence."

Section 5 says: "The City Board of Health shall report to City Council all expenses necessarily incurred in discharging the duties required by this ordinance, and such expenses shall be allowed by City Council and paid out of the treasury of said city."

When I found that this ordinance existed, I asked Dr. Willeford to call a meeting of his Board, which was done, all members being present. The ordinance was read to them, and the fact made plain that it simply required action on the part of the Board, and it was not necessary to appeal to the Council. After discussion, the members concluded they would not act until the City Council was consulted, and permission obtained to go ahead and do what was necessary to suppress smallpox. Mayor Downey was present at the meeting of the Board, and thought the procedure adopted would be best. The Mayor accordingly called a special meeting of the Council to meet that night. I was called upon to address the Council, and I tried to make plain the best procedures for suppressing smallpox. My suggestions were well received, and a

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vote of thanks was offered. The Council then passed a resolution, directing the Board of Health to proceed along the lines outlined by myself. The Health Board accordingly convened, and the minutes of the meeting are appended hereto:

SPECIAL MEETING OF THE CITY BOARD OF HEALTH.

"Washington, Ind., June 19, 1902.

"This special meeting was called at the instance of Dr. Hurty, State Health Officer.

"Present: W. P. Ellis, President; C. S. Hicks, W. C. Willeford, M. D., Secretary.

"The smallpox situation was discussed, and the means for handling it were considered. Dr. Willeford moved the adoption of the following order:

"Whereas, Smallpox, a dangerous transmissible disease, exists and has existed in Washington for some time; and,

"Whereas, It is to the best interests of the city that said disease should be put out, and an urgent necessity exists that it should be suppressed; and,

"Whereas, The law makes it the duty of the City Board of Health to take prompt action to suppress infectious and contagious diseases; therefore, it is

"Ordered: 1. That all physicians shall immediately report to the City Health Officer all cases of eruptive disease coming under their professional charge, which even remotely resembles smallpox, and when no physician is in attendance, the householder shall make the report.

"2. The City Health Officer shall immediately quarantine all cases of eruptive disease or transport the same to the Eruptive Hospital for care and treatment; he shall immediately vaccinate all who have been exposed to the infection, and cause them to be disinfected; he shall also disinfect all houses and all places known or supposed to be infected.

"3. When necessary, the City Health Officer shall employ guards to maintain quarantines. He may also employ such medical aid and such nurses and help in the Eruptive Hospital as may be needed: Provided, The Board of Health approves each employant, and he may purchase such medical and food supplies as are necessary, rendering an itemized bill for all purchases.

"4. The Board of Health will report to the Council all expenses incurred in the suppression of smallpox, and the bills will be carefully itemized and sworn to.

"5. Any one disobeying these regularly enacted orders shall be promptly prosecuted as the law provides."

It is apparent, if this order is carried out with energy and intelligence, that smallpox will soon be suppressed in Washington.

County. On June 19 I also called on Dr. D. B. Smoot, County Health Officer, who was not in town in the forenoon of that day. Dr. Smoot was made Secretary of the County Board of Health March 10, 1902, to fill the unexpired term of Dr. C. C. McCown, resigned. Dr. Smoot reported:

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"There have been 34 cases of smallpox in Daviess County, outside of cities and towns, since I was appointed. No doubt many cases have existed which were not reported; indeed, I know this to be the truth."

Not to the knowledge of Dr. Smoot had the County Commissioners ever sat as a Board of Health, or had they ever issued any health orders. Dr. Smoot stated he had gone forward on his own account and enforced the law and the rules, and could not tell whether the bills incurred would be paid or not. The County Council appropriated, September 4, 1901, for the year 1902, the sum of $480 for health purposes; $450 of this was for the salary of the Health Officer. With Dr. Smoot I visited the Auditor's office and from Mr. W. W. Aikman, Deputy Auditor, I learned the County Commissioners have never sat as a Board of Health, and he also corroborated Dr. Smoot's statement in regard to the appropriations made by the County Council.

Of the incorporated towns in Daviess County, Dr. Smoot says: "There have been no cases of smallpox at Elnora. The Health Officer, Dr. W. J. Tolliver, says the Town Board is behind him and the town is ready to fight smallpox if it appears."

Odon. The Health Officer, Dr. DeMotte, has reported one case at that town. He says the Town Board is ready to support him and orders that he shall take prompt action to suppress smallpox.

Montgomery. The Health Officer, Dr. C. E. Trainer, reports there has been no cases of smallpox in his town, and that his Board has ordered him to take prompt action to suppress smallpox if it appears and to do all that is right and necessary to guard the town against introduction of the disease.

After talking the matter over with Dr. Smoot, I asked him to call his County Board of Health together and instruct its members to sit as a Board of Health, and to take such action and issue such orders as might seem necessary in the premises. In order to make sure that this action, if taken, would be of a practical nature, I suggested that appropriate orders should be formally passed, spread of record upon the Board of Health minute book, duly promulgated, and energetically enforced.

I left Washington and Daviess County feeling certain that from that time on energetic, practical work would be done in the line of preventing the spread of infectious and contagious diseases.

VISIT TO GREENE COUNTY.

June 20, 1902.

To the State Board of Health:

I left Washington on the morning of June 20, arriving at Bloomfield, the capital of Greene County, about 9:30 a. m. The Health Officer of Greene County, Dr. W. H. Cole, does not live at Bloomfield, but holds his residence at Switz City. The books are kept at Bloomfield, as the law commands.

Upon arrival, I immediately called upon Dr. H. V. Norvell, Health Officer of Bloomfield. From him I learned the city had no health ordinance, and the Town Board had never sat as a Board of Health and had

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never issued any special orders in regard to infectious diseases. I called in Mr. I. H. Stalcup, President of the Town Board, and the smallpox situation was discussed with these two gentlemen. Not a case of smallpox has so far been reported in Bloomfield, but President Stalcup and Secretary Norvell both said that the Town Board would issue a special order to meet the conditions, and would, therefore, hereafter be prepared to fight smallpox should it appear. I called upon Auditor H. L. Downey. Not to his knowledge had the County Commissioners ever sat as a Board of Health, and no health orders had ever been issued by the Board of Health. The Commissioners, however, had ordered that quarantine be established wherever smallpox appeared. The County Council had made a total appropriation of $820 for health purposes, the salary of the Secretary being $420. There was, therefore, available for fighting contagion the sum of $400.

From Bloomfield I went to Switz City and called upon Dr. Cole, the County Health Officer. He reported the Commissioners had never sat as a Board of Health. One health order had been issued by the Commissioners. As they have no legal power to issue health orders, of course said order was null and void. Dr. Cole reported that smallpox first appeared January, 1899. Since that date there had been 100 cases, with one death. At the present date, June 20, there were ten cases. He said he thought the County Board of Health would act promptly when the members understood the situation. I rode with Dr. Cole to the town of Lyons. There I met Dr. E. Shirts, Health Officer. He reported two cases of smallpox at present in the town. These we visited, and found one of them had been quite severe and the other very mild. Dr. Shirts reported that his Town Board of Health was very active and had ordered him to enforce the rules of the State Board of Health and to report all bills incurred for payment. The subject of smallpox suppression was thoroughly canvassed with Dr. Cole, and he was directed to call a special meeting of the County Board of Health, and present the resolutions and order which are herewith appended, and urge their passage, the same to be recorded in the Secretary's book, duly promulgated and energetically enforced.

VISIT TO HARTFORD CITY.

To the State Board of Health:

An urgent telephone message from Dr. W. N. Cronin, Health Officer of Blackford County, led me to visit that city on June 24. Arriving at the town, together with Dr. Cole and Dr. Truitt, City Health Officer, I visited the family of Mr. Clapper, a dairyman, and the family of Mr. Hays, a farmer. At both places smallpox prevailed. At the first house every member of the family had been attacked, and all were convalescent. One of the cases, that of the youngest daughter, has been very severe indeed. At one time her life was despaired of, as the disease had taken the semi-confluent form. At Mr. Hays' one case existed in his son, who was about twenty years old. Two younger children, both girls, at the time of my visit had fever and other symptoms of smallpox. I have no doubt they were acquiring the disease. These cases had been disputed by some neighborhood physicians, and the families were, of course, pleased to side

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with the doctors who decided the disease was not smallpox. It was on this account with the attending troubles that impelled Dr. Cronin to ask the State Board of Health for a visit. Mr. B. S. Wampler, Auditor, informed me the County Commissioners had never sat as a Board of Health. They had never issued any health orders. The County Council had appropriated $275 for health purposes, and, as $225 of this was for the salary of the Secretary, but $50 remained to fight infectious and contagious diseases. Two of the Commissioners happening to be in town, they were invited to meet me at Dr. Cronin's office. There we talked over the situation and both of the gentlemen said they would be glad and would most certainly, without delay, do everything they possibly could to suppress smallpox in Blackford County, and to prevent its re-introduction. The following resolutions and orders were gone over, section by section, and both of the gentlemen said they would support the said order at a meeting which would be held Monday, June 30. In the meantime, they directed their Secretary to go ahead and do everything that was necessary to suppress smallpox. Dr. Truitt, City Health Officer, said: "My Board gives me most satisfactory support. I am confident, if the conditions demand, that a pest house will be established; also, that a general vaccination order will be issued."

KNIGHTSTOWN.

June 30. Dr. Barrett, Health Officer of Knightstown, telephoned this office, asking for help and advice. Upon arrival at Knightstown, I visited with Dr. Barrett eight houses and saw, in all, 12 cases of semi-confluent smallpox and one case of discrete smallpox. There had been one death the week previous from smallpox in Knightstown. There were 36 houses in all under quarantine, but all were not visited. After informing myself thoroughly as to the situation, I met with the Council which was in special session. I presented an ordinance which has heretofore been recommended by the State Board of Health and also gave specific recommendations as to what should be done. The special ordinance was passed without a dissenting voice and orders were issued that the Health Officer should enforce the said ordinance to the fullest degree. Further order was issued that fresh vaccine should be purchased and free vaccination offered to the people, and further that an abundance of disinfecting material and a formaldehyde generator should be purchased and that henceforth all infected houses should be thoroughly disinfected.

The following correspondence from Dr. Wishard was deposited with the Secretary and was ordered made of record:

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June 7, 1902.

Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis, Ind.:

My Dear Dr. Hurty—I enclose herein a copy of a letter just written to Dr. J. N. McCormack, Secretary of the Kentucky State Board of Health, Bowling Green, Ky., and one written to Hon. W. T. Durbin, Governor of Indiana. The letters are self-explanatory.

Very truly yours,

WM. N. WISHARD,
Vice-President Indiana State Board of Health.

June 7, 1902.

Hon. W. T. Durbin, Governor of Indiana, Indianapolis, Ind.:

My Dear Governor—I went from your office this morning to Dr. Hurty's office, and requested him to immediately call up the County Auditors in Franklin and Spencer counties, and notify them that we expected to have a Board meeting, and that, unless they gave positive assurance that proper steps would be taken to control smallpox in their locality, we would issue a quarantine order against them. Dr. Hurty has reported to me in the past two hours that he received absolute assurance from each of the County Auditors referred to that they would call their Boards together and carry out most fully the steps necessary to stamp out the disease.

I have, therefore, in pursuance with your suggestion made to me personally this morning, prepared and mailed a letter addressed to Dr. J. N. McCormack, Secretary of the Kentucky Board of Health, covering the status in Indiana. I enclose you herein a copy of my letter to Dr. McCormack, and I will take a copy of the same with me to Saratoga, and personally present it to Dr. McCormack next Tuesday.

As I am about leaving the city, I venture to suggest that, in my judgment, it will be desirable to keep one or two men on the road for the next two or three weeks. After careful investigation of affairs at the Health Board office today, after leaving your office, and after conference with Dr. Hurty, I am satisfied that the necessary daily work of the office will suffer if Dr. Hurty is kept out of the office. I would therefore recommend that Dr. Ferguson or Dr. Brayton (senior or junior, as both are thoroughly competent) be engaged looking after the counties in the farthest part of the State and that Dr. Hurty be assigned to work in counties very centrally located, such as Shelby, Brown, Madison and other nearby localities. I have a great deal of confidence in Dr. Ferguson's capacity for this outside work, and if he is available, I would recommend that he be asked to continue it. As I believe I notified you the other day, we contracted with him to devote his time to this work during the present week at a salary of $10 a day and his expenses. I think on his return it would be well for you to have a personal conference with him and Dr. Hurty as to the work still necessary to be done. In my judgment, one man looking after the outside counties and Dr. Hurty looking after the centrally located counties, will be kept busy for at least two weeks longer if we are

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to impress the local authorities with the fact that we are in earnest in our endeavors to suppress smallpox. The local authorities are willing to do what they can, but need the influence of higher authority to stimulate them to immediate and necessary action.

Very respectfully yours,

WM. N. WISHARD,
Vice-President Indiana State Board of Health.

June 7, 1902.

Dr. J. N. McCormack, Secretary State Board of Health, Bowling Green, Kentucky:

My Dear Dr. McCormack—I am requested by Governor Durbin to present to the Kentucky State Board of Health, through you, an official report as to the status of smallpox in Indiana at the present time. For the past week Dr. J. N. Hurty and Dr. Charles E. Ferguson have been making a sanitary inspection of the counties in the southern part of Indiana. They find conditions improving, and in but two counties have the officials shown undue laxity in enforcing the proper regulations for the control of the disease. These counties are Spencer and Franklin. Dr. Hurty has spent a part of two days in Spencer County, and has received positive assurance from the local officers that they will enforce the most thorough regulation of smallpox in Spencer County. Dr. Hurty has, by direction of the Governor and the Indiana State Board of Health, informed the officials in Spencer County that if conditions are not entirely satisfactory within forty-eight hours, the county will be quarantined. The assurance given him by the local authorities lead us to believe there will be little difficulty in controlling the disease in that locality. Dr. Ferguson is in Franklin County, and yesterday attended a conference with the County Commissioners and County Health Officer, and informed them that there would be a quarantine order against their county unless they enforced the regulations to control smallpox at once. We have long distance telephone assurance from the County Auditors of Spencer and Franklin counties today that the County Health Boards in these two counties are taking all steps within their power to control the disease. From official information received from thirty-four counties during the past few days, we find that, whereas in these thirty-four counties in April there were five hundred and eighty-seven cases of smallpox, there were during May but two hundred and seventy cases in the counties referred to, making a reduction in the number in counties referred to of about fifty-five per cent.

It is the purpose of the Governor and the Indiana State Board of Health to continue all efforts now being made until smallpox is driven out of the State. We trust the foregoing report is sufficiently satisfactory to warrant you in annulling the quarantine order against Indiana, which is now temporarily suspended pending an official report from our Board.

Very respectfully yours,

WM. N. WISHARD,
Vice-President Indiana State Board of Health.

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Marion, Ind., June 4, 1902.

My Dear Dr. Wishard—Yours of June 3 received, and is the first detailed information I have received of affairs since our meeting. I most heartily approve of your action in each instance and appreciate your consideration in writing me so fully about it.

Captain Anderson tried to read me a circular to be sent to Health Officers, but I could not understand it over the wire, and told him to submit it to you, and if you approved it, to attach my name to it as President. I presume he has done this.

Hoping that the much-vexed question has been satisfactorily solved and that we may soon be able to have smallpox under control, and with kindest regards, I am, very truly yours,

J. H. FORREST.

Indianapolis, Ind., June 4, 1902.

Dr. W. N. Wishard, Indianapolis, Ind.:

Dear Doctor—I am just in receipt of your favor of 3d instant, transmitting to me the prepared report of the committee of your Board which visited the Kentucky Health Board; also the copy of the letter which you have forwarded to Dr. J. H. Forrest, President of the Board. As you request, the report will be sent to President Forrest for his signature, and your directions will be carried out in passing it on to the other members of the Board. I received this morning reports from Dr. Ferguson and Secretary Hurty. I will be pleased to have you drop in at any time and read these daily reports, should you care to do so. Dr. Hurty reports conditions in Posey and Vanderburgh counties "most favorable." In Warrick County two officers "are constantly on duty. They report nineteen cases in May and six cases for the first two days of June. The Health Board was in session and gave assurances of past and future activity in suppressing smallpox." Dr. Ferguson reports twenty-four cases during the month of May in Dearborn County, but at the present time only one case, which was reported on the 20th day of May. All cases rigidly quarantined. He reports quite a number of cases existing across the river in Boone County, Kentucky, this statement being corroborated by the Health Officer in Switzerland County. No cases in Ohio County. None in Switzerland County since last November. Much activity and good spirit prevailing in all the counties he has visited. I have called for a list of the Health Officers of the State, and will today wire each county where smallpox is reported to exist, asking for conditions. This will give notice of a determination at this end of the line to look after the matter.

Very truly,
W. T. DURBIN.

June 7, 1902.

Dr. J. H. Forrest, President Indiana State Board of Health, Marion, Ind.:

My Dear Dr. Forrest—Dr. Cook and myself attended the conference yesterday with the Governor, Secretary of State and Auditor of State, in reference to steps to be taken to suppress the smallpox epidemic in the

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State. We are very sorry you could not be with us. The matter was discussed pretty thoroughly, and the Governor called our attention to the language of the statute appropriating $6,000 for the Board of Health, and specifying the purposes for which the money is appropriated, among which is the suppression of smallpox. Dr. Cook and I stated to him that it was impossible to meet the expense of controlling smallpox out of the regular appropriation of $6,000, and that it was the view of the Board that the epidemic fund was appropriated for conditions such as the present. The Governor stated that the emergency fund of $50,000 was at our command, but he thought we ought to use our own appropriation for this purpose, and he therefore proposed that if we spent 5 per cent. of our $6,000 appropriation, which would make a total of $300, in fighting epidemic diseases such as smallpox, that he would meet all necessary additional expense out of the emergency fund. Dr. Cook and I agreed to this proposition, and I am sure it will meet your approval and that of the other members of the Board. I think it is a happy solution of the difficulty. On Saturday last I gave the Governor a verbal report of our trip to Louisville the day before. Dr. Hurty had prepared a written report of our conference with the Kentucky State Board of Health on the train coming from Louisville. I did not present this report to the Governor because I desired to revise it a little, but I will present it to him today. We were courteously received by the Kentucky Board, and, after we had gone over the subject pretty thoroughly in a friendly discussion, the Kentucky Board then decided to suspend their quarantine order for ten days, with the agreement that it would be annulled at the end of that period if our Board gave them positive assurance that everything was being done that could be done.

I will send the report of our conference to the Governor this morning and will request that he forward it to you for your signature, to be forwarded by you to Drs. Davis and Cook for their signatures, and then return to the Governor. Dr. Hurty will sign it on his return from Southern Indiana.

In the conference which I had with the Governor on Saturday, when I presented a verbal report of our Louisville trip, we decided that the conditions were such as to require immediate and decided action, and at the Governor's suggestion, I requested Dr. Hurty to deputize a competent man to aid him, and that they at once begin a thorough tour of inspection of the infected counties. After conference with Dr. Hurty, it was decided that Dr. Charles E. Ferguson should be deputized, and should go at once to Lawrenceburg and work the river counties, and that Dr. Hurty would go to Evansville and do the same thing, Dr. Ferguson working from east to west, and Dr. Hurty working from west to east, until they should meet in the south central part of the State. This tour will probably take the better part of this week. The May reports of smallpox are just beginning to come in, and, as you know, it will be some days before a complete report can be obtained from the different counties. It is evident, however, from information obtainable from all sources, that we have got a good deal more smallpox to deal with than the official reports indicate. As soon as we can meet the demands of the Kentucky Board of Health I believe the Secretary should be required to visit every county in the

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State where smallpox exists, and use his best effort to stimulate the local officers to proper action. The Clerk of the Board is preparing a circular letter to be sent to every Health Officer in the State where smallpox exists, in accordance with the recommendation contained in the report to the Governor of our Louisville meeting, which report you will receive from the Governor for your signature.

With kindest regards, I am, sincerely yours,

WM. N. WISHARD,
Vice-President Indiana State Board of Health.

June 7, 1902.

Hon. W. T. Durbin, Governor of Indiana, City:

Dear Governor—I hand you herewith the written report of the conference between the Indiana and Kentucky State Boards of Health, held last Friday, May 30, at the Galt House, Louisville. I gave you a verbal report of the same on Saturday last, but did not file the written report because I desired to revise it a little. Will you kindly mail this report to Dr. J. H. Forrest, of Marion, Ind., President of the Board, for his signature, with the request that he mail it to Drs. T. Henry Davis and Clark Cook for their signatures. Dr. Hurty will sign it on his return from Southern Indiana, where he is now making a sanitary inspection of the border counties.

Referring to the personal conference which I had with you on last Saturday afternoon, I would say that pursuant to the suggestions then made by you, I at once went to the office of the Secretary of the State Board of Health, and requested the Secretary, Dr. Hurty, to start that night on a tour of inspection of the Ohio River counties. After conference with him, we also, in pursuance with your further suggestion, decided to send Dr. Charles E. Ferguson to the southeastern part of the State, to aid in making immediate sanitary inspection of the infected part of the State bordering on Kentucky. I requested Drs. Hurty and Ferguson to urge the County Health Officers to institute local quarantine and to require vaccination in all infected localities, and to say to the local authorities that it was your intention, with the State Board of Health, to immediately bring the smallpox epidemic under control.

In my personal judgment the expense necessary on the part of the State Board of Health will not be very large, and under the present conditions I think Drs. Hurty and Ferguson should be kept in the southern part of the State during the present week, and that immediately thereafter Dr. Hurty should be sent to every county and infected locality in the State as rapidly as possible, and that he should be given such additional aid as the conditions existing may require. I am rather inclined to think that Dr. Hurty can do most of this work himself after a week or ten days' assistance. Conditions may develop necessitating more help than appears necessary at present, but I am inclined to think the assistance above indicated will meet the requirements.

I also enclose herein a copy of a letter I have written this morning to Dr. J. H. Forrest, in reference to our conversation yesterday afternoon, at which time you proposed that if we would spend 5 per cent. of our

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appropriation (viz. $300) that you would meet such additional necessary expense in fighting epidemics out of the emergency fund as may be necessary. With kind regards, I am, very truly yours,

WM. N. WISHARD.

The following circular was ordered sent to all County Health Officers:

To the Health Officers of Indiana:

Dear Doctor—On Tuesday, May 27th, the State Board of Health of Kentucky declared a quarantine against the State of Indiana, on account of the smallpox epidemic in this State, to take effect June 1st. At a conference of the Indiana and Kentucky State Boards of Health held in Louisville, Ky., May 30th last, the quarantine was suspended ten days upon the representation of the Indiana State Board of Health that every effort in its power would be used to control and suppress this disease.

It now rests with the Health Officers and the civil authorities of this State to say by their work whether this quarantine shall be entirely done away with, or put in force against the people of our State and thereby entail the loss of thousands of dollars, and much suffering from hundreds of our citizens being deprived of employment; many of them becoming public charges thereby.

The time is very short and this work requires sharp, decisive, efficient action at once on the part of our Health Officers and local authorities. Complaints have been received at this office that some of the local authorities refuse to furnish the necessary funds to carry out the work of quarantining, disinfecting, etc. For the benefit of those Health Officers who are handicapped in that manner the following opinion by the Attorney-General of the State was given to the Governor yesterday. It is that "The State Board of Health has the power to mandate the local authorities when they refuse to furnish the necessary means to suppress this disease."

You will inform your local authorities of this opinion, and that, while this Board has no desire to take this step, it will not hesitate to do so if they do not act vigorously and at once. We ask you to redouble your efforts in this good work of warding off disease and death, and assure you of our earnest support. Report progress to this office, and, if necessary, expert physicians will be sent to your assistance. Our time is short, but by united, vigorous work we will succeed.

By order of the State Board of Health.

(Signed) J. H. FORREST,
President.

(Signed) J. N. HURTY,
Secretary.

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DR. FERGUSON'S REPORTS.

Dr. C. E. Ferguson was appointed Deputy State Health Officer June 1, and directed to visit and investigate smallpox in the counties bordering on the Ohio River, commencing at Dearborn County and stopping with Clark County. Dr. Ferguson also visited Franklin and Adams Counties and his reports follow:

June 3, 1902.

Indiana State Board of Health:

Gentlemen—I have the honor to submit the following report of work done June 2d.

DEARBORN COUNTY.

Lawrenceburg—

Dr. A. T. Fagaly, County Health Officer, reports that during the month of May there were reported to him 24 cases of smallpox in his county. There is at present only one case in the county reported May 20. All cases are rigidly quarantined in the county when they occur in the towns. In the country, when isolation is by reason of remoteness of neighbors unnecessary, domiciliary quarantine is not practiced. A majority of the cases in this county can be traced to West Harrison, Ind., where the disease was mistaken for chickenpox.

Quite a number of cases have existed across the river in Boone County, Ky., where quarantine is not practiced or enforced, though vaccination has been quite general. The funds for fighting the disease have been freely given by the County Council.

The Health Officer at Aurora states that he knows of no cases in his neighborhood. Health Officer W. C. Henry attended a number of cases last month.

OHIO COUNTY.

Rising Sun—

Dr. G. A. Stevenson, County Health Officer, reports that at present there is not a case in Ohio County. The last one occurred in September, 1901. Dr. Stevenson, who is Health Officer for county and city, states that the County Council has placed at his disposal all the money necessary for his use in fighting the disease. They allowed him, however, only $10.00 for treating the various cases he attended last year.

SWITZERLAND COUNTY.

Vevay—

Dr. J. W. Smith, County Health Officer, states that there have been no cases in the county since last November. The city pays the expenses of the quarantine and the Township Trustee pays for the food and fuel. Vaccination has been general.

Patriot, Ind.—

Dr. R. A. Jameson, Town Health Officer, states that there has been no cases in his vicinity since last year. Has had no trouble about money

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to quarantine. The town has been well vaccinated. He confirms the report that many cases have developed in Boone County, Ky.

I have interviewed a number of citizens of the towns visited and they appear ready to second the efforts of the Health Officers in their efforts to suppress the disease.

Last year there was much doubt as to the identity of the disease, but at present there appears to be a general acquiescence in the diagnosis.

I find the Health Officers exceptionally active and intelligent and enjoying to an unusual degree the confidence of their respective communities.

I have just arrived in Madison and shall see the County Health Officer as soon as he returns to his office.

I have the honor to be, very truly yours,

C. E. FERGUSON, M. D.,
Deputy Health Officer.

June 4, 1902.

Hon. W. T. Durbin, Governor of Indiana:

Dear Sir—I have the honor to make report of work done June 4.

CLARK COUNTY.

Jeffersonville—

There were four cases of smallpox reported from this county in May, not counting those that occurred in the Reformatory. Three of these were in the county and one in the city. There is at present none in the county. Three convalescent cases ready to be discharged are in the pesthouse. The city controls the pesthouse and admits patients from the county, the Township Trustees paying the city for their care. Dr. W. H. Sheets, County and City Health Officer, has been thanked by the town authorities for his efficiency in controlling the disease. He assures me that he has had no difficulty in securing the money necessary to maintain strict quarantine.

FLOYD COUNTY.

New Albany—

Dr. R. W. Harris, County Health Officer, and Dr. McIntire, Health Officer for New Albany, state that at present there is not a case in Floyd County. One case was reported in May and he is now in the pesthouse in Jeffersonville. There is no pesthouse in Floyd County, but the officers state there has been no difficulty in securing ample funds for the work incident to effectual quarantine.

Yours very respectfully,

C. E. FERGUSON, M. D.,
Deputy Health Officer.

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June 4, 1902.

I have the honor to make the following report of my investigations in the smallpox conditions as far as I have made them today:

JEFFERSON COUNTY.

Madison—

There were five cases reported in Jefferson County in the month of May. There are now three convalescent cases in the county, no new cases. They are in Graham Township, eighteen miles from Madison. Dr. Hatch, the County Health Officer, states that the last cases were in the family of a young man who contracted the disease in Louisville, where he was attending school. Dr. Lewis, Health Officer for Madison, secured a pesthouse two years ago and all cases are promptly sent there. The city maintains the institution and pays all expenses incident to taking care of cases developing within her borders. He has no trouble in securing money. Respectfully submitted,

C. E. FERGUSON, M. D.

June 5, 1902.

I report tonight result of my investigation of part of Franklin County. The situation here is deplorable. I visited the southeastern section of the county today and found a number of cases of smallpox, with but one house carded. Members of the families afflicted were scattered over the township. I found cases in two families where no precautions of any kind had been taken. One case is in the family of a barkeeper and his saloon is the loafing place of the community. The County Health Officer here is efficient and intelligent in matters of hygiene, but the fault is due to two factors. First a difference of opinion among the physicians and the total failure of the County Commissioners to grant the money needed for guards, etc. Physicians who recognize the disease are afraid to report it as such, as the citizens have threatened them with loss of patronage. The County Commissioners meet tomorrow and I shall meet them and persuade them to give financial aid to the Health Officer, or that the county will be quarantined by the State authorities. I have received reports of cases from the timid physicians and a promise to promptly report all new cases. The work here is slow because of the long drives necessary to reach the infected sections.

Yours faithfully,

C. E. FERGUSON, M. D.,
Deputy Health Officer.

Batesville, Ind., June 6, 1902.

I have the honor of reporting to you the work of today: I met the County Commissioners of Franklin County and laid the facts before them. They admitted to me that they had not asked for an appropriation from the County Council, because they did not believe the disease existed in the county.

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The County Council does not meet again until September and I asked the Board to have the Auditor call a meeting of the Council. They listened to me but gave no satisfaction or promise. The physicians do not report the cases of smallpox and the County Health Officer is powerless, as he tells me that he had physicians indicted for failure to report contagious diseases and the prosecutor will not press the cases to trial.

There are undoubtedly a large number of cases in the county, but it will take a house-to-house investigation to find them. Doctors tell me that they have met persons in the road going to towns in the eruptive stage of the disease.

If the Auditor does not act promptly in calling the County Council, I suggest you threaten the county with quarantine and in the meantime take steps to mandate the officers to do their duty.

Yours faithfully,

C. E. FERGUSON, M. D.,
Deputy Health Officer.

Decatur, Ind., June 7, 1902.

The condition of affairs in Adams County is similar to that in Franklin County. The number of cases of smallpox reported in May was 54. Number reported in June, 38. There are twelve (12) cases in the city of Decatur.

The County Health Officer, Dr. Costello, is powerless to enforce quarantine because of lack of funds and support of the County Commissioners. They will not furnish guards for the houses infected nor pay for the disinfectants necessary.

In one instance he closed the church, but the people promptly went to another one in the neighborhood.

Physicians refuse to report cases developing in their practice, but the Health Officer is powerless to enforce the law. Last November he filed affidavits against those who violated the law, but has been unable to get the cases to trial.

The attorney for the Board of Commissioners said that he would fight any attempt to mandate the Board to spend any money in the work of quarantine.

There is a two-room pesthouse in the county. One patient who was sent there ran off because no one was there to guard and because nothing was provided in the way of food or medicine.

The papers refuse to publish the warnings of the Health Officer as they fear the merchants who advertise.

From my observation in this county the only thing that will compel the authorities to do their duty is to threaten them with quarantine.

Yours very truly,

C. E. FERGUSON, M. D.,
Deputy Health Officer.

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Indianapolis, Ind., June 16, 1902.

Indiana State Board of Health:

Gentlemen—I have the honor to report that I visited Dunkirk, Jay County, on Sunday and Monday, 15th and 16th inst.

I called upon Dr. Murray, the City Health Officer, and learned that there had been a number of cases of smallpox in his town that had not been reported to him. I find on investigation that there have been seven cases in the town and but two have been reported. The case in question at present is that of a barber, Lon Ney. His attending physician protests that he does not have the disease, though the house is carded by the Health Officer. Dr. Fertich, the attending physician, took a cab and with two friends and the patient, then in the eruptive stage, drove to Muncie. Dr. Spickerman of the Town Health Board pronounced it smallpox and they drove back to Dunkirk unconvinced.

Dr. Fertich does not name the disease, but denies that it is variola. He promised me that he would, however, report all eruptive diseases to the health authorities. Respectfully,

C. E. FERGUSON, M. D.

REPORTS OF DR. NELSON BRAYTON.

Dr. Nelson Brayton was appointed a Deputy State Health Officer June 1 and sent to investigate smallpox in the following counties: St. Joseph, Clay, Sullivan, Greene, Whitley and Wabash. His reports follow:

Indianapolis, Ind., June 3, 1902.

Indiana State Board of Health:

Gentlemen—As regards the smallpox condition in South Bend as I found it on my visit to that city last Friday and Saturday, I may make report of the following condition of affairs:

In company with Dr. A. M. Butterworth, Local Health Officer, I visited all the cases of smallpox in the city, about ten in all.

Webster	2
Dawson	3
Wunderlich	3
Patterson	2

The case about which some dispute and diagnosis occurred developed into a case of variola, the youngest child in the Wunderlich family, aged 2 years.

In one section of the city, that in which the Wunderlich, Webster and Patterson cases occurred, there has evidently been an extensive epidemic of the disease, which had been reported to the Local Health Board as "chickenpox." In company with Dr. Butterworth I visited several of these cases, which are now recovered. There is no doubt but that these

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were cases of genuine variola. One of the cases occurred in the wife of a grocery keeper named Reustheimer. She reported that she had not been incapacitated by the disease, that she had had the grip a few days before she broke out and had been at her regular work all the time in the grocery while the eruption was on her person. The epidemic has been exceedingly mild, no deaths have occurred, no severe symptoms, complications or marked pocking was noticeable.

The local officers seemed to be doing a satisfactory work in quarantine and vaccination. Domiciliary quarantine, however, has in the main been relied upon. Proper information and instruction about the disease, the method of its prevention, vaccination, were given the physicians whom I met and the local papers.

I have the pleasure to be, very respectfully yours,

NELSON D. BRAYTON, M. D.,
Deputy Health Officer.

Brazil, Ind., June 12, 1902.

To the State Board of Health:

As regards the smallpox situation in Brazil, Clay County, I beg leave to report the following conditions as I have found them:

The County Health Officer, Dr. Carson, reports me that he has had no difficulty with the County Board of Health (County Commissioners) in regard to payment of his vouchers. They admit the justice of his demands and have responded promptly with funds when asked to do so.

Dr. Carson reports about 11 cases in April, 22 in May and no deaths. At present he states there are no cases quarantined throughout the county. There are, however, 5 cases in one family in the city of Brazil. These are traced from a family which had measles reported as smallpox, or at least so reported that it mixed the diagnosis. None of these cases are at all serious. These cases were seen with Dr. Williams, the local municipal officer.

I also saw today Dr. Pyle of Carbon. Dr. Pyle reports 7 cases—one of these he thought to have been of hemorrhagic type with recovery. He reported that one of these cases when first seen by Dr. Van Sandt (also of Carbon) was pronounced chickenpox, although in adult male. Dr. Pyle said he immediately instituted quarantine, which was rigidly observed.

Vaccination seems to be quite generally refused by the citizens of the country and city. Dr. Carson reports it almost useless to try to enforce it upon them. Disinfection is practiced by formaldehyde. General observance of quarantine regulations is reported with but one exception—a boy who broke his quarantine.

With the exception of the possible infection by a sporadic case which walked the streets here in a pustular stage two weeks ago, no further serious trouble seems to be in store at the immediate present.

I shall tomorrow visit the cities and towns in the east and south of the county, perhaps winding up at Clay City in the evening.

Very respectfully,

NELSON D. BRAYTON,
Deputy Health Officer.

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Brazil, Ind., June 13, 1902.

To the State Board of Health:

With the exception of Clay City and Bowling Green I have now seen personally and conferred with all the Health Officers of the county.

Dr. Geo. F. Lewis has replaced Dr. Thornton as Health Officer at Knightsville. There appeared at Donaldsville, a suburb of Brazil, and near Knightsville, a number of cases of variola in the months of May and April. These started from a boy who ran around the streets in the pustular until about five families were affected. There were seven (7) cases in the Hoosier family; four (4) in the Banford family, and three others were reported to have had the disease. Most of these cases I saw.

Dr. Young, at Harmony, reports 22 cases as having occurred in his care this spring. One of the families broke quarantine—Steele was the name. Domiciliary quarantine was practiced. Vaccination was quite generally refused, even after its efficacy had been shown in preventing the disease.

Poland, Ind.—

Poland, Ind., had an epidemic one year ago—no cases this year—about 75 cases occurred. No deaths, but two cases very dangerously sick. Vaccination was quite generally refused. Dr. Elliott tried his best to encourage vaccination, but failed. There are two other doctors in town—one a Dr. Chamberlain, who said he had not vaccinated a single person. The other was Dr. Bartholow, who preached against vaccination. Both of these last two men are old fogies, who should be retired.

This epidemic at Poland was interesting as it shows the harm that could be done by the anti-vaccinationist, especially a physician.

Dr. Elliott seems a very good man. He said he was utterly unable to get over 40 people to be vaccinated. The people in the town were very obstinate and bullheaded.

Center Point, G. R.—

At Center Point Dr. Finch reported things well under control. He has kept a systematic record of all cases and vaccinations; has even recorded the age, sex and number of times successfully vaccinated on charts.

He has vaccinated over 900 people in Sugar Loaf Township. There have been about 78 cases in his jurisdiction to date. None this year. Two deaths. He reported that the Blue trial incensed some people against vaccination in his district. He seemed a very efficient, earnest and capable officer.

Staunton—

Dr. P. H. Veach reports no cases in this epidemic with but one exception. The community became frightened when Clay City was infected by the disease and was well vaccinated. He had vaccinated over 350.

I had forgotten to state that at Poland Dr. Elliott stated that no attention was paid to the rule that no child should be permitted to enter the school unless properly vaccinated. He said this ruling was a dead letter. I remain, respectfully,

NELSON D. BRAYTON,
Deputy Health Officer.

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Switz City, Ind., June 14, 1902.

To the State Board of Health:

I have today visited in Clay City where I find Dr. Wolfe still preaching against vaccination and smallpox. People in the town say that he now believes the epidemic was smallpox, but he argues that it was not simply to show his "obstinacy and bullheadedness."

Dr. Modesitt stated that no cases had occurred this month or since the last epidemic. About twenty per cent. of the people were opposed to vaccination, but he said no prominent or educated people were among them. Generally they were illiterate. He now says he believes there should be compulsory vaccination laws to prevent the disease; as did also others with whom I talked in the town.

In the epidemic of 1900 $1,000 was spent by the town to fight the disease. Aside from this, allowance of over $600 were made in the township for physicians' bills.

He thought there were over 600 cases at that time. Others said 1,200. About 1,000 vaccinations were practiced in the epidemic. Two deaths occurred in the epidemic—one a girl of 3 years and another a woman of 46.

No attention is paid in the schools as regards the vaccination requirements on admission.

GREENE COUNTY.

Worthington—

Dr. W. H. Beaty reports no cases in his jurisdiction. Vaccination was partially practiced some time ago.

Switz City—

Dr. W. H. Cole, the Health Officer of the county, reports that there have been 32 cases in the county this winter: 3 cases at Scotland, 18 cases at Newberry, 9 cases at Marco, 1 case at Linton; 1 death at Newberry. Quarantine had been broken once. He had been compelled to place a guard over houses in three instances.

Dr. Cole reported that the County Council had formally appropriated $350 to fight the epidemic and designated it as a "quarantine fund." As a result some of the County Commissioners had refused to sign vouchers made necessary for the proper disinfection of premises, etc. Dr. Cole stated that as a result of their parsimony he had been compelled in all instances to fumigate and disinfect at his own expense in all instances—a decided injustice, he thought, as the liberal interpretation of the word and purpose of the allowance of the County Council should have included fumigation or disinfection also.

The names of the County Commissioners who composed the Board are: Andrew Bucher, Worthington; George Marshall, Newark; J. D. Hasman, Linton.

I called on Mr. Hasman at Linton and he was favorably disposed toward the granting of appropriations for payment of claims, but the other two men are not so disposed.

Mr. Frank Ramsay of Bloomfield is the main man on the County Council.

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Linton—

At Linton, Ind., I found one case, but it had been just released from quarantine. Its origin was traced to Illinois. It was kept in quarantine in a tent at the outskirts of town. No more cases have so far developed.

At Marco, Ind., there are reported 5 cases. I shall go there tomorrow. The history of these cases is quite interesting as it shows extraordinary culpability in the attending physician, Dr. Lukenbill, who also had the disease in his own family—and who is reported to have been fined by the grand jury in Knox County for failure to report cases. I shall then next proceed into Sullivan County.

Respectfully,

NELSON D. BRAYTON,
Deputy Health Officer.

Sullivan, Ind., June 16, 1902.

To the State Board of Health:

During the last two days I have more fully investigated the condition of affairs in the southwestern part of Greene County, and I find them not nearly so reassuring as I had hoped to do. At Lyons, Ind., (no Health Officer) I found two well developed cases of smallpox—these were discovered entirely independently of any previous reports of physicians. Both of these cases were in children. The first case was one of a child in pustular stage who had had no doctor in attendance. The other was found from questions asked of an inhabitant about breaking-out diseases. I found a well developed case of smallpox being treated by Dr. Aydelotte for chickenpox.

I also discovered two other cases at Inland City, about 5 miles from Marco, on the S. I. R. R.

At Marco I found three new cases—one in the McCombs family and two in the Byrum family. I also investigated 5 other families and found that three of them had already had the disease.

In the family of Dr. Lukenbill, one of the children nearly died of the disease and is very badly pocked. I should judge that over twenty cases had occurred in the town unrecognized and unreported.

I also saw and diagnosed scabies in three different families. For want of time in fulfilling my engagement for Sullivan County I was unable to trace a rumor of more of the disease in a family on the western border of the county and who were supposed to have had the disease three weeks ago.

As regards the case of Dr. Lukenbill, he attended five weeks ago in Knox County a case of smallpox and pronounced it "black itch." He also after the case was quarantined (so I am informed), told the patient he did not have smallpox and advised him to get up and go around at his business. This the man did.

About three weeks ago a Justice of the Peace fined him $10 and costs $10.05 for so doing. This in addition to his attorney's fee made the offense cost $30.05. He also, I am informed, went about his practice in Marco when three of his family had the disease. If I am correctly informed this occurred while they were yet in quarantine. The exact ethics of

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such procedures, I must confess that I do not understand. There is in his locality a very bitter feeling against him and it looks as though the law was flagrantly violated.

It may, however, in justice to him be said that at the present time he is using all due precaution in the way of disinfection while treating his present cases.

SULLIVAN COUNTY.

Pleasantville—

Mr. Bough, of the County Council, reports that $500 was appropriated to fight smallpox in the county. Dr. Jackson, of Pleasantville, reported 3 cases in the Brewar family. These are now well and out of quarantine. He seems to have taken prompt and efficient action. Vaccination was practiced to a large degree in the community.

Carlisle—

No cases reported. Vaccination has been practiced to quite a large extent, however. One or two sporadic cases of chickenpox were reported earlier in the season—about December and March, I believe. Just what these really were I could not trace.

Respectfully,

NELSON D. BRAYTON,
Deputy Health Officer.

June 12, 1902.

CASES OF SMALLPOX.

Marco, Ind.—

McCombs, 7; one reported by writer.
Byrum, 2; both reported by writer.

Lyons, Ind.—

Grace Cole, 1; reported by writer.
Harmon Brown, 1; reported by writer.

Inland City—

Booker, 1; reported by writer.
Yowal, 2; reported by writer.
Approximately 20 cases in Marco and vicinity unreported—mostly recovered.

NELSON D. BRAYTON,
Deputy Health Officer.

Indianapolis, Ind., June 17, 1902.

To the State Board of Health:

In company with Dr. Thixtun I today visited every case of smallpox with one exception in Sullivan County. I may state that I believe the situation is now being well handled by the local officers. Dr. Thixton states that people are now maintaining their quarantine.

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I found indisputable evidence that some one in Star City had broken quarantine about two weeks ago and gone over to Shelburn. A clipping of this from some local paper was sent you a few days ago. I believe the quarantine is now being rigidly enforced and the people of Shelburn show no disposition to break it.

Dr. A. J. Neilans, a local physician at Shelburn, had positively refused to consider the epidemic as smallpox after the first part of May. He said the disease was chickenpox. He is now vaccinating people, however. (It is currently rumored that he will be prosecuted by the Town Board after this epidemic for the stand he took in the matter at the start.)

Cases in Sullivan County number about 45 as follows: Shelburn—Eldridge, 5; Miller, 3; Anders, 5; Addie Miller, 1; Bolinger, 1; Kochor, 2; Beasley, 5; McClosky, 7; Stanley, 5.

At Star City there are about 9 cases, one or two of which are now ready for disinfection. Hymera is now said to be free of the disease.

Respectfully,

NELSON D. BRAYTON,
Deputy Health Officer.

Columbia City, Ind., June 25, 1902.

State Board of Health, Indianapolis, Ind.:

Gentlemen—As regards the smallpox situation at Garrett, Ind., I beg leave to report the following condition of affairs:

There are in all five families reported and carded as smallpox. One case in each family with the exception of one family, which has two cases (6 in all). All these cases were seen by me personally. In two instances there is a tendency to break quarantine. I suggested a guard for these placed, which suggestion will be followed out.

I should like to report a man named Dr. Carey living at Huntertown, who has persistently refused to recognize the disease or its contagiousness, need of disinfection, etc. He has been informed that if he continues further visits to one of these families he will be placed in quarantine himself.

I believe proper precautions against further spread of the disease will be rigidly instituted and enforced by the local authorities. Vaccination was quite generally practiced one year ago.

DEKALB COUNTY.

Dr. Sebring reports that there has been no formal action on part of County Board of Health towards making appropriation in case of epidemics. Just at present there are no cases in the county except those at Garrett. At Auburn vaccination was very generally practiced one year ago and no cases have appeared. The epidemic there was rigidly treated and the Mayor and City Health Officers were thoroughly on their guard

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against any spread of the disease. The county has a pesthouse near Auburn.

I shall continue my investigation tomorrow in Whitley County.

Respectfully,

NELSON D. BRAYTON, M. D.,
Deputy Health Officer.

Warsaw, Ind., June 26, 1902.

State Board of Health, Indianapolis, Ind.:

Gentlemen—I have today visited the Secretary of the County Board of Health at Columbia City, Dr. O. V. Schuman. He reports that there are no cases of smallpox in the county, that the county is fairly well vaccinated and that the people are alive and awake to the danger of the disease and ready and willing to assist the physicians in its suppression should an epidemic occur. He states that no formal action has been taken by the County Council to appropriate funds in case of an emergency, but that they are willing to do so at once should conditions arise that anything should be necessary in a financial way.

Dr. Williams reports no cases in Columbia City proper.

I have also visited the towns of Pierceton, Larville, Winona and Warsaw (Kosciusko County). Dr. Bash, the County Health Officer, was out of the city today, but he has no record of cases in the county at present. Dr. Weber reports none in the city. He states that vaccination is not opposed and that the Council would take proper precautions to see that everything necessary would be supplied in case an epidemic did occur.

Pierceton, Ind.—

At Pierceton, Ind., Dr. Long reported having had one case in a family north of the town in April. He vaccinated all of the other members of the family and none of those exposed took the disease, although there were five members in the family who had never been vaccinated. Complaint was made by the local officer, Dr. Leedy, that Dr. Coffman had refused to recognize the contagious character of the disease or its identity in an epidemic which the town had had a year ago, but on the threat of quarantine for himself he manifested a different spirit and obeyed the law in the case.

I shall tomorrow visit in Sidney where an epidemic is reported to have recently occurred and some of the towns of northern Wabash County. Wabash City itself is reported to have no cases.

Respectfully,

NELSON D. BRAYTON, M. D.,
Deputy Health Officer.

Claypool, Ind., June 27, 1902.

The State Board of Health:

Gentlemen—I beg leave to report the following status of affairs as I have found them in Wabash County and the southern part of Kosciusko County.

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There seems to be at present no cases reported in either of these counties. At Servia it is estimated that over 45 cases occurred during the winter. Dr. J. B. Williams, Health Officer of the county, reports that vaccination was bitterly opposed by some of the town folk and hence the wide dissemination of the disease.

At North Manchester Dr. Lower reports no cases at present. About 12 cases occurred during the spring. Vaccination was commonly and frequently practiced and hence the disease spread but little.

Dr. Mooney reports but 4 cases having occurred during the spring and winter at Laketon. No cases have occurred at Silver Lake and nothing at Liberty Mills.

At Sidney, in Kosciusko County, about 65 cases occurred in the winter. Vaccination was not extensively practiced and was opposed by some of the town people. A few cases were carried to Pierceton and a few more to some other places. The original infecting case came from South Dakota.

I have seen no cases of smallpox today, although my attention was called to two cases that were of dermatological interest and one of them was of suspicious nature. It was not smallpox however.

Respectfully,

NELSON D. BRAYTON, M. D.,
Deputy Health Officer.

The letters here given were sent to the Health Officers of every county. The object of the letters plainly appears and the reports to date show that a deeper interest in health work has been aroused in many counties.

June 28, 1902.

Dear Doctor—You are aware that your County Commissioners under the law, constitute a County Board of Health, ex-officio. The Commissioners have powers and duties not belonging to the Board of Health, and the Board of Health has powers and duties not belonging to the Commissioners. It is therefore necessary for the Board of Health to formally act as such, when health matters are attended to, and for the Secretary to carefully record in a minute book all transactions of his Health Board. These minutes must afterward be approved and signed by the President and Secretary. As there has been a good deal of irregular action by Health Boards, you are directed to bring this matter before your Board. As smallpox has existed in the State more or less for four years and as the infection is now freely distributed in cars, depots, courts and other public places, it is only reasonable to expect that the disease will continue to prevail unless it is strongly opposed. If therefore smallpox has not yet appeared in your county, be assured it most likely will come in time. Indeed, it will be passing strange it if does not come. The State Board therefore directs, in order to be prepared for the fight, that you present to your Board of Health the enclosed resolutions and urge that they be formally passed. When this is done you will know your

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powers and duties and be able, if occasion requires, to proceed intelligently against the enemy. Do not fail to acknowledge receipt of this letter and in reply answer the following questions:

1. Have your Commissioners ever formally sat as a Board of Health, and if so, when?

2. Have you a minute book in which you record all transactions of your Board and also your reports to the Board?

3. How much money, including your salary, was appropriated by your County Council for health purposes for the year 1902?

4. What salary is allowed you?

When your Board of Health meets be sure to inform the State Board as to what action is taken in regard to the enclosed order.

Very truly yours,

J. N. HURTY,
Secretary.

By order State Board of Health.

Resolutions referred to in preceding letter and sent to all county officers:

Whereas, It is possible to suppress all infectious and contagious diseases, and as such diseases cost the people large sums of money and are the cause of much unhappiness and sorrow to the people, and

Whereas, This body is constituted by the law a Board of Health and is commanded by the law to take prompt action to arrest the spread of infection and contagion, it is ordered:

1. The Secretary of this Board, who is County Health Officer, shall energetically enforce the health statutes of the State, the rules of the State Board of Health and the rules and health orders of the County Board of Health.

2. He shall promptly put in quarantine all known cases of infectious diseases as are listed in rule 1 of the State Board of Health when said cases are outside of the corporation of cities and towns. Within the corporations of cities and towns the authorities thereof shall promptly take like action.

3. With the consent of the Auditor, the County Health Officer may engage medical attendance, employ guards to maintain quarantine, and he may purchase medicines and food supplies when the conditions demand. Not more than $2.00 per visit may be paid for the necessary medical attendance and completely itemized bills checked and sworn to, shall be presented before payment will be made.

4. If at any time the work in the prevention of the spread of infectious and contagious diseases is more than can be expected of the County Health Officer, he may, with the consent of the Auditor, employ one or more intelligent men to act as deputies to establish quarantines and to conduct disinfections. Said deputies, and also quarantine guards shall not be paid more than the statutory amount of 20 cents per hour actually served; and their expenses, such as livery hire, car fare, beds and meals, will be paid upon presentation of fully itemized bills which are sworn to.

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5. Whenever any case or cases of smallpox are placed under quarantine, all persons known or reasonably supposed to be exposed shall be vaccinated, and after thorough disinfection in body and in apparel will be permitted their liberty. If any person or persons known or reasonably supposed to be exposed to smallpox, will not submit to vaccination and disinfection in body and apparel, then they shall be placed in quarantine until such time, in the opinion of the County Health Officer, as may be safely allowed their liberty. The vaccine shall be supplied by the County Health Officer, it shall be pure and fresh and for each person vaccinated the sum of 40 cents will be allowed, provided a complete record of each vaccination be supplied, giving date, name, postoffice address, age, sex and previous history, if any, of vaccination.

6. When visiting persons known to be affected with smallpox, diphtheria and scarlet fever, all physicians and Health Officers shall protect their clothing and hair against infection, and shall thoroughly disinfect their hands before coming in contact with the public. To accomplish this a linen or rubber coat with skull cap shall be worn by physicians and Health Officers when visiting patients afflicted with the diseases named, and said linen or rubber coat and skull cap shall be carried in a hand bag or other approved receptacle and kept well disinfected with formaldehyde. The hands shall be disinfected by washing with antiseptic soap and applying an effective liquid antiseptic.

7. The County Health Officer shall purchase formaldehyde candles in amount not to exceed $20.00, and, as necessity requires, such purchase may be repeated with the consent of the Auditor. Said formaldehyde candles are to be used for disinfecting houses known or supposed to be infected. A complete record of all disinfections shall be kept, and made a part of the Health Officer's account of his health work, as required in 8.

8. The County Health Officer shall each Monday, and oftener if he wishes, record in the minute book of the Board of Health a complete account of health work done by him during the several days preceding, and said minute book shall be kept in the office of the County Auditor.

9. This order shall be promulgated as the law requires by being published in two consecutive issues of two papers of different political denominations, and the Secretary is ordered to so promulgate.

10. Any one violating the State Board of Health statutes, the rules of the State Board of Health or the rules or orders of the County Board of Health shall be promptly prosecuted by the County Attorney and the County Health Officer shall actively aid in all such prosecutions.

Passed by the ———— County Board of Health, ————, 1902.

————————, President.

————————, Secretary.

July 2, 1902.

Dear Doctor—Referring to our letter of June 28th, with enclosed order to be presented to your County Board of Health, the order may be amended as you and your Board see fit. The action is recommended, not ordered, by the State Board. It is an effort on our part to try to have all County

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Boards of Health ready for action when the time comes, or to do things right if the time for action is now at hand.

Very truly yours,

J. N. HURTY,
Secretary.

The following correspondence is self explanatory:

June 30, 1902.

Hon. Winfield T. Durbin, Governor of Indiana:

Dear Sir—I have the honor to inform you that on Sunday, June 29th, at 4 p. m., I received a letter from Dr. J. N. McCormack, Secretary of the Kentucky State Board of Health, and this letter read as follows:

"Am just in from Michigan and have been trying to get you by 'phone. Will you wire me on receipt of this as to smallpox conditions in Indiana? Our terms of suspension expire Tuesday, as you know, and I would like to be advised by you today, or tomorrow at the latest. Address me at Bowling Green."

After trying to secure you by telephone and failing, I finally sent the following telegram:

"Dr. J. N. McCormack, Bowling Green, Ky.—Smallpox diminishing rapidly. Only a few cases now in Southern Indiana. State Board is active; also local Boards. Governor and State officers heartily support all right efforts to prevent disease."

I have this day, June 30th, 2:45 p. m., received the following:

"Secretary Indiana State Board of Health—Quarantine raised upon your assurance that good work will be continued.

"J. N. McCORMACK,
"Secretary."

I presume this ends the Kentucky nonsense.

Knightstown. I went to Knightstown this morning because of request from the Town Board of Health. I tried to get over last Friday, and also last Saturday, but was prevented by subpœna to the Marion County court. At Knightstown serious conditions exist. There are thirty-two houses under quarantine on account of smallpox, and there are in all thirty-six cases. Twelve cases are of the confluent form and very serious. I fear four of them will die. There has already been one smallpox death in Knightstown. I visited Ex-Senator Newby, who has the disease. The attack was a very mild one, but he has been quite sick for about two weeks. There are only a very few eruptions upon his face, but his back and breast are well peppered. He has at no time been seriously ill, and I think will be ready to be discharged from quarantine so far as he is concerned in another three days. His children were immediately removed from his house, and it remains yet to be seen whether or not his wife comes down with the disease.

I met the Town Council, and, without hesitation, they passed the proper orders which are necessary for the suppression of smallpox. A pest-house and a contagious disease service is established. Disinfectants have been purchased, and also vaccine. The Health Officer, Dr. O. H. Barrett,

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is an intelligent and energetic man. He knows exactly what must be done, and one section of the special ordinance empowers him to employ necessary help, purchase supplies, and, in a word, do everything which is rational and scientific for the prevention of smallpox.

I had a telephone message from President Forrest directing that I visit Rush, Franklin and Ripley counties. I had already arranged to go to Franklin County tomorrow, Tuesday. It is almost impossible to secure the co-operation of the people until the disease appears in virulent form, and possibly causes a death or two, as was the case at Knightstown.

Very respectfully,

SECRETARY.

Indianapolis, Ind., July 3, 1902.

Dr. J. N. Hurty, Secretary State Board of Health, Indianapolis:

Dear Sir—In the absence of the Governor, I beg to acknowledge receipt of your courteous communication of 30th ult., with reference to the smallpox quarantine by the Kentucky authorities, and to inform you that I have placed it on his desk for his personal consideration when he returns to the city. He is now in the Northwest with his family, and is not expected to return until about the 12th instant.

Respectfully,

CHAS. E. WILSON,
Secretary to the Governor.

AN OPINION BY THE ATTORNEY-GENERAL.

April 29, 1902.

Secretary State Board of Health:

Dear Sir—I have to answer the questions contained in your letter of March 27th, as follows:

"1. The health law passed in 1899 makes it obligatory upon County Commissioners to promulgate the rules of the State Board of Health by publishing them in local papers. In Grant County the Commissioners are anxious to conform to the law, but the County Council will not appropriate the money necessary to fulfill the law. What steps should be taken under such conditions?"

The act of 1899, amendatory of the Board of Health law, provides that the State Board of Health shall promulgate its rules by sending copy of the same to the Secretary of the County Board of Health, "and the Commissioners of said county shall cause such rules to be published for two consecutive issues of two weekly newspapers, representing the two dominant political parties of said county, if such papers be published." (R. S. 1901, §6715.)

It thus appears that there is a plain statutory duty imposed upon the County Commissioners by the act of 1899, to publish the rules of the State Board of Health. It appears that the County Council has not appropriated the money necessary to fulfill the law. Unless such appropriation be made, the County Commissioners of course have no power to make the publication required by law.

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Section 25 of the county reform law provides that no Board of County Commissioners shall have power to bind the county by any contract or agreement, or in any other way to any extent, beyond the amount of money at the time already appropriated by ordinance for the purpose of the obligation attempted to be incurred, and all contracts and agreements, express or implied, and all obligations of any and every sort, beyond such existing appropriations, are declared to be absolutely void. (R. S. 1901, §5594-e-1.)

The county reform law also provides that estimates shall be filed with the County Council at its annual meeting of all county expenses for which appropriations must be made, but that by a three-fourths vote of the Council, and not otherwise, an appropriation may be made for an item not contained in any estimate. (R. S. 1901, §5594-z.)

It is quite probable that in the case of which you speak no estimate was filed for the expense of promulgating the rules of the State Board of Health, with the Grant County Council, and it is certain that no appropriation was made. Where no appropriation has been made, the law provides that—

"If at any time after the adjournment of the regular annual meeting in September an emergency should arise for further appropriations for any purpose for which the Council is authorized to appropriate by this act, such further appropriations may be made at a special meeting of the Council, on estimates prepared and presented as hereinabove provided by an ordinance passed by at least a two-thirds vote of all the members of the Council, and not otherwise." (R. S. 1901, §5594-a-1.)

An appropriation can therefore be made at this time only as provided in the section last quoted, and it would probably be expedient to have estimates prepared and submitted at a special meeting, although it would be possible, by a three-fourths vote, to make an appropriation without estimates.

Whether the County Council could be compelled to appropriate is a question which the Supreme Court has not yet decided. In four different cases which have been before the Supreme Court, attempts have been made to mandate County Councils to make appropriations, and in every instance these attempts have been unsuccessful, although the court has not gone so far as to say that an appropriation, in the discharge of a plain statutory duty, could not be compelled by mandamus.

The question is one which is very doubtful, and, without the authority of the Supreme Court, I could not say that mandamus would lie. However, I can think of no other possible remedy, and am inclined to think that, rather than see the law fail, the courts would grant this very extraordinary remedy.

I do not believe, however, that where a plain case of duty is presented to a Board of responsible citizens, such as make up the County Councils of the State, they would be so blind to their oaths as to make it necessary to proceed against them in the courts.

"2. Smallpox is now epidemic in Grant County, and the Health Officer announces himself as helpless to stop the spread of infection because the County Council refuses to appropriate the money which is necessary to accomplish the work. The County Board of Health, composed, as you

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know, ex-officio of the County Commissioners, is willing, on its part, to fulfill the demands of the law. What steps are to be taken to enable the health authorities to enforce the statute, which seems in this instance to be entirely nullified by the County Council?"

In this case I would suggest that a special meeting of the County Council be called, and that, in view of the emergency, estimates be prepared and submitted to them, and that if no appropriation is made, proceedings be instituted against them by the County Commissioners, through the County Attorney, to compel an appropriation, by mandamus.

"3. Will it be illegal for the County Board of Health to proceed to enforce the law which says: 'It shall be their duty to take prompt action to arrest the spread of infectious and contagious diseases?' Or will it be necessary for the Board to first procure an appropriation from the County Council before the commands of the law can be fulfilled?"

In this case the same procedure should be followed as in the previous one.

I have the honor to be, very truly yours,

W. L. TAYLOR,
Attorney-General.

After full discussion of the smallpox condition in Franklin County the Deputy Attorney-General was called and consulted, and it being finally determined to impose quarantine upon Franklin County, Mr. Moores drew up the following proclamation which was passed:

PROCLAMATION BY THE INDIANA STATE BOARD OF HEALTH.

Whereas, Smallpox, a loathsome and dangerous and easily communicable disease, is epidemic within and throughout Franklin County, Indiana, and—

Whereas, The health law of the State requires Health Boards to take prompt action to arrest the spread of contagious and infectious diseases, and as—

The Franklin County Board of Health has not fully performed the commands of the law in this respect, and as the law provides that all Boards of Health "shall perform such duties as may from time to time be required of them by the State Board of Health pertaining to the health of the people, it is therefore—

Ordered by the Indiana State Board of Health as follows:

1. The County Board of Health and all City and Town Boards of Health of Franklin County, Indiana, are directed to immediately enforce the health statutes and also to enforce rules 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16, as appear in the certified copy of the Rules of the Indiana State Board of Health hereto attached.

2. The County Board of Health and all City and Town Boards of Health of Franklin County, Indiana, are directed to provide the money necessary to enable their Secretaries to enforce the health statutes and

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the rules of the State Board of Health, and said Boards are further ordered and directed to cause all known cases of smallpox within their respective jurisdictions to be placed in quarantine, and there held, and the quarantined persons provided for until such time as the Health Officer in charge may decide that all danger has passed.

3. With the consent of the Auditor, the County Health Officer may engage medical attendance, employ guards to maintain quarantines and he may purchase medicines and food supplies when the conditions demand. Not more than $3.00 per visit may be paid for necessary medical attendance, and completely itemized bills checked and sworn to for all expenses incurred shall be presented before payment will be made.

4. If at any time the work in the prevention of the spread of infectious and contagious diseases is more than can be expected of the County Health Officer, he may, with the consent of the Auditor, employ one or more intelligent men to act as deputies to establish quarantines and to conduct disinfections. Paid deputies and also quarantine guards shall not be paid more than the statutory amount of twenty cents per hour actually served, and their expenses, such as necessary livery hire, car fare, beds and meals, will be paid upon presentation of fully itemized bills, which are sworn to.

5. Whenever any case or cases of smallpox are placed under quarantine, all persons known or reasonably supposed to be exposed shall be vaccinated, and, after thorough disinfection in body and in apparel, will be permitted their liberty: Provided, Said person will faithfully promise to report to the Health Officer for medical examination ten days from the date of exposure. If any person or persons known or reasonably supposed to be exposed to smallpox will not submit to vaccination and disinfection in body and in apparel, then said person or persons shall be placed in quarantine until such time, in the opinion of the County Health Officer, as they may be safely allowed their liberty. The vaccine shall be supplied by the County Health Officer; it shall be pure and fresh, and, for each person vaccinated, the sum of fifty cents will be allowed, provided a complete record of each vaccination be supplied, giving date, name, postoffice address, age, sex, and previous history, if any, of vaccination.

6. When visiting persons known to be affected with smallpox, diphtheria and scarlet fever, all physicians and Health Officers shall protect their clothing and hair against infection, and shall thoroughly disinfect their hands before coming in contact with the public. To accomplish this a linen or rubber coat with skull cap shall be worn by physicians and Health Officers when visiting patients afflicted with the diseases named, and said linen or rubber coat and skull cap shall be carried in a handbag or other approved receptacle and kept well disinfected with formaldehyde. The hands shall be disinfected by washing with antiseptic soap, and applying an effective liquid antiseptic.

7. The County Health Officer shall purchase formaldehyde candles or formaldehyde solution in amount not to exceed $20.00, and, as necessity requires, such purchase may be repeated with the consent of the Auditor. Said formaldehyde candles or formaldehyde solution are to be used for disinfecting houses known or supposed to be infected, and all such houses

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shall be disinfected by the Health Officer or his deputies. A complete record of all disinfections shall be kept and made a part of the Health Officer's account of his health work, as required in 8.

8. The County Health Officer shall each Monday, and oftener if he wishes, record in the minute book of the Board of Health a complete account of health work done by him during the several days preceding, and said minute book shall be kept in the office of the County Auditor.

9. Any one violating the State health statutes, the rules of the State Board of Health or the rules or orders of the County Board of Health, shall be promptly prosecuted by the County Attorney, and the County Health Officer shall actively aid all such prosecutions.

10. All Boards of Health of all counties bounding Franklin County and all Boards of Health of all counties of the State of Indiana into which any person from Franklin County shall come, are ordered and directed to place in quarantine for fourteen days all persons entering them from Franklin County.

11. The order as given in 10 shall be enforced until annulled by the State Board of Health.

Passed in regular session of the State Board of Health, Friday, July 11, 1902.

Attest:

————————————, President.
————————————, Secretary.

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FOURTH QUARTER.

August, September and October, 1902.

FOURTH REGULAR MEETING FOR THE FISCAL YEAR

OFFICE INDIANA STATE BOARD OF HEALTH,
Indianapolis, Ind., October 10, 1902.

Present: Drs. Forrest, Cook, Davis, Wishard and Hurty.

President Forrest called the meeting to order. The minutes of the last meeting were read and approved.

COMPLAINT OF MILL DAM AT MILLGROVE, OWEN COUNTY.

Petitions and evidence pro and con were presented concerning the Devore Mill dam at Millgrove. Said documents are filed in the office and action was postponed pending receipt of further evidence. The attorneys for the defense, Judge Robinson and Mr. Hickem, made statements before the Board.

The manuscript for the Report for 1901 was reviewed and it was

Ordered, That the same be approved and given over to the Printing Board.

The Secretary's report for the fourth quarter, being called for, was read and after discussion ordered spread of record.

REPORT OF SECRETARY FOR FOURTH QUARTER.

Smallpox has prevailed throughout the State during the quarter. July was the worst month so far since the epidemic began on account of the number of deaths. There were 502 cases and 46 counties were infected. The deaths numbered 17, 15 of these occurring at Knightstown. This one month, therefore, scores a higher record

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for deaths than did the whole State during the year 1900. There were, in all, 183 cases at Knightstown. The neighboring towns all quarantined against Knightstown, but no quarantine of the town itself was made. The interurban trolley line from Indianapolis was voluntarily stopped by the Trolley Company at Charlottesville, a small town about five miles west or Knightstown. The trains of the Pennsylvania road stopped regularly, and during one month, not to exceed ten passengers got off at Knightstown. Soon after the first three deaths occurred, it is estimated that one-third of the inhabitants of the place left. The prostration of business was complete. For six weeks the merchants insisted they did not take in enough money to pay rent, and for four weeks not a person registered at the hotel. An energetic fight was waged against the disease, but it was not until every one in the town had been vaccinated that the epidemic ceased.

During the quarter the Secretary has made, at his own expense, 26 water analyses; 20 of these were found to be polluted and the sources were condemned from which the samples were obtained. Twelve samples of sputum were examined and 7 of these were found to contain tubercle bacilli. Two diphtheria cultures were received and examined and both found to be true diphtheria.

The following visits were made during the quarter:

On July 9. Anderson and Muncie.' At Anderson to confer with the authorities of the town in regard to the water supply and also in regard to the conditions of White River at that place. At Muncie to confer with the authorities in regard to the pulp mill, also the strawboard mill and in regard to a new line of sewers which were contemplated.

July 20. Knightstown, account of smallpox.

July 23. Brookville, account of smallpox.

August 7. Warsaw, account of smallpox.

August 21. Spencer, account of teachers' institute.

August 26. Albion, account of smallpox and teachers' institute.

September 1. Winamac, account teachers' institute.

September 4. Lynn, account of dedication of new schoolhouse.

September 30. Fowler, account of smallpox.

The expenses of the Secretary were paid at the last three named places The reasons for these visits and the results of the same are fully set forth in the reports which follow:

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ANDERSON AND MUNCIE.

July 9—

Mr. Marshall O. Leighton, Hydrographer of the U. S. Geological Survey, was at Anderson and Muncie the first week in July. On the 9th the Secretary was invited by the Health Officer of Anderson and the Committee on Public Health of the City Council to meet Mr. Leighton at Anderson. An invitation of like character was received from Muncie. At Anderson the object was to confer with the authorities named, also with Mr. Leighton in regard to stream pollution, and the filtration of the public water supply. Arriving at Anderson, I joined Mr. Leighton, the Health Officer and the Chairman of the Health Committee of the City Council, and together we visited the city waterworks. The supply at present is taken directly from White River without filtration, sedimentation or any preparation is pumped directly to the people. This water supply is not used for drinking purposes and the city authorities especially advise the people not to drink it. It, however, is used for other domestic purposes, as bathing, and as it is polluted water, it is dangerous for this purpose. A long conference was held as to the best method for purification and the best way of supplying Anderson with good water. My advice was that filtration beds be constructed and the supply taken directly from White River. The Anderson authorities lean strongly toward deep wells.

The American Strawboard Co., at Anderson, was visited and the river inspected where the refuse from this factory is delivered into the same. The works is operating under a permit from the State Board of Health and they claim they are following said permit in every detail. This was certainly true at the time of our visit, but there were reasons to believe that the permit had not been completely obeyed or else the signs present were those remaining from past periods. On the same day, at Muncie, with Mr. Leighton, I met the City and County Health Officers, also two members of the Council. With these gentlemen we inspected an area of the city where new sewers were contemplated. This subject was studied and our advice given in regard to the matter. We then visited the pulp mills, which are caring for their refuse under a permit from the State Board of Health. Nothing offensive or polluting was being discharged into the river at that place. The

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Consumers Strawboard Co. was next visited and at this place it was found that the State Board of Health permit was being observed.

KNIGHTSTOWN.

July 20—

The Chairman of the Town Board of Knightstown telephoned me, urging me to come to Knightstown on Sunday, July 20. There had been a fresh outbreak of smallpox and he feared that all was not being done that could be to prevent the spread of the disease. A partial history of the epidemic at Knightstown has already been given. The said epidemic began June 2. A young man, Jesse Swain, who traveled from Cincinnati, was taken sick at Knightstown and the disease proved to be smallpox. It was first diagnosed measles. Swain was unvaccinated and eventually developed confluent smallpox and died June 12. On that day a second case appeared. It was a mild attack of a person who was never vaccinated and recovery took place. On the 22d of June quite a number of cases appeared all at once. The exact number is not known. From this time on the disease rapidly appeared and deaths occurred. On July 20, at the time of my visit, I found that 12 new cases had suddenly sprung into existence two days before, and it was this fact that was alarming the President of the Town Board. All of these cases were among unvaccinated people, and they all had refused vaccination. This brought matters to a head so far as vaccination was concerned, and the Town Board issued an order that every unvaccinated person who refused to be vaccinated should be placed under quarantine until he so consented. This proved effective and after general vaccination was accomplished, no more cases appeared. By August 10 the town was free from the disease, but the country people in the surrounding region still refused to trade at Knightstown or go near the place, and the Knightstown authorities again called upon me to issue a statement that no danger on account of smallpox existed in their town. This request was gladly complied with.

REPORT OF VISIT TO BROOKVILLE ON ACCOUNT OF SMALLPOX.

In accordance with the directions of the State Board of Health and the Governor, I went to Brookville on account of the smallpox situation in Franklin County. I arrived at 9:16 Tuesday morn-

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ing, July 23d, and immediately called upon the County Health Officer, Dr. Geo. W. Squier. He was absent in the country seeing a patient and I, therefore, called upon several business men in order to talk over the situation and secure their influence and aid in inducing the health authorities of the town and of the county to enforce the health law and to pass special ordinances prepared by the Attorney-General. I first met Mr. Bradt, manager of the Thompson-Norris Paper Co. He heard me most courteously and promised his fullest support in my efforts with the Town Board and the County Board of Health. With Mr. Bradt I called upon Mr. Rochefeller, a dry goods merchant. He, also, listened courteously and offered his influence. I called next upon Mr. Burk, editor of the Brookville American. He heard me courteously and offered all the assistance he could give. Afterwards I met Mr. Trichler, a groceryman, and he, too, offered his assistance. Mr. Trichler went with me to call upon Mr. Werst, President of the Town Board, and introduced me. At first Mr. Werst was inclined to be a little offish, but eventually came around and said that the Town Board would, without question, pass the ordinance which the State Board of Health recommended.

On Wednesday night the Town Board was called in special session and I was invited to address the members. The simple story of the law and its requirements was told and various questions were asked. The Board was not in regular called session, but had come together voluntarily. President Werst promised, and so did each of the members individually, that at their next regular meeting, Monday night, July 28, the ordinance would be passed as read that night. This was very satisfactory, and in addition it was promised that the ordinance would be enforced and every scientific precaution known would be taken in order to prevent the spread of smallpox. It may be noted here that a small pesthouse had already been provided on the lot occupied by the waterworks building. This was a very small structure and would hold probably four patients.

The next day, according to arrangements, the business men named above, joined me and we met the County Board of Health which had come together at my invitation, the meeting not being formal and legal, but entirely voluntary. The whole situation was presented to the members and they agreed they would pass the

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order recommended by the State Board of Health and which was drawn up by the Attorney-General. This would be done at a regular meeting to be held Monday, July 28. They could not, of course, act at the time, because the meeting had not been regularly called, but was a voluntary one. They also promised that the order would be energetically enforced and that every scientific measure known would be used in order to prevent the entrance and spread of smallpox in Franklin County.

I left Brookville at 1:30 on Thursday, July 24, and rode in a buggy through the settlements of Oak Forest and St. Marys and the town of Oldenburg and into Batesville. The object of the journey was to make investigations as to the existence of smallpox in the region traversed. Shortly before we reached Oak Forest, the young man who was driving me, and whom I had hardly looked at, asked if I was an Indianapolis doctor, and I told him I was; he then asked if I thought this "pimple disease," which so many people were having, was smallpox. I told him I was quite certain the majority of cases of what he called "pimple disease" were mild smallpox. He replied, "Then I have it sure." I lifted his soft hat and found at the edge of the hair three immature smallpox pustules. We stopped further on in a shady place and I examined him very thoroughly. I found from this examination and also from the history he gave me, that he undoubtedly was suffering at that very moment from an attack of smallpox and was in one of the stages where it is most easily transmitted. This is one example of many which could be given showing that smallpox infection is being spread in almost every direction, and shows how futile it is to try to stop the disease unless vaccination is generally practiced. This boy was, of course, finally placed in quarantine and I thoroughly disinfected myself before going among the people.

At Oak Forest I made inquiries of Mr. Fred Stump, who owns the general store at that place. He told me there had been some cases of eruptive disease in that neighborhood, but he knew of none at the present time. He said: "In the spring, St. Marys, a postoffice settlement about five miles away, had been visited by several cases of what some doctors said was smallpox and what other doctors said was chickenpox." He also told me he had heard

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that Will Becker was sick with a fever, and that it was probably typhoid fever. I inquired carefully how I could find Mr. Becker's house. Eventually I arrived there and found that Mr. Becker was almost certainly entering into an attack of smallpox. He had high fever, backache, headache, gastric disturbances and all of the beginning symptoms.

At St. Marys I found the people very reticent, and one man, a saloonkeeper, was not only reserved, but a little threatening, for he told me I had better move on. Entering this place I saw a little girl who was about nine years old, who was holding a horse while he baited on the grass of the front yard. She had on slippers but no stockings and her legs were well covered with scabs. She certainly was just getting over the desquamative stage of smallpox. She announced she was from Batesville and was visiting her grandmother at St. Marys. I was told by a man who would not give his name, "We have lots of cases of breaking out around here, but it don't hurt any one, we don't need any doctoring, and we won't be quarantined." This same information was secured by Dr. Squier in other localities in the county.

At Oldenburg I called upon the Health Officer, Dr. Mull. He told me there had been many cases of smallpox at Oldenburg, but he had promptly quarantined them and cared for them the very best he possibly could. He said: "I now have a blacksmith and his family under quarantine and said blacksmith threatened to shoot me if I tacked a card upon his house. I have not only placed the card upon the house, but I have confined the whole family to the premises." Dr. Mull took me to see a saloonkeeper, who had smallpox and who was supposed to be under quarantine, but we found him waiting upon the bar. He was in the desquamative stage of a medium attack of smallpox. Dr. Mull immediately removed him from the premises and placed him with warning under quarantine again.

Oak Forest and St. Marys are small settlements with postoffices, and are not incorporated. They are under the sanitary direction and care of the county. Oldenburg is incorporated and Dr. Mull informed me the Town Board had given him full powers and positive orders to do everything that was necessary and known to science for the purpose of preventing the entrance of smallpox and its spread.

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Arriving at Batesville, I called upon the Health Officer, Dr. Chas. M. Gibson, but he was away in the country, and then I called upon the leading physician, Dr. Jos. Ziteke. He told me there were several cases of smallpox in the town, but none were under his charge. He cited the following which was printed that day in the Batesville Tribune:

"There are a few cases of so-called smallpox in this vicinity, but the patients are neither in bed nor quarantined, and they are doing well."

It seemed, therefore, that things were somewhat loose in Batesville so far as smallpox conditions were concerned. I left word for Dr. Gibson that he must see to it that the law and the rules of the State Board of Health were thoroughly enforced, otherwise the State Board would have to take hold. I arrived home via Big Four from Brookville at 12:15 on the morning of July 25.

WARSAW.

August 7—

On account of an urgent telephone from the Manager of the Winona Assembly, who told me smallpox had been discovered, and he strongly requested that I visit Warsaw and the Assembly, and give them such advice and aid as I could. Upon arrival at Warsaw with Dr. Webber, the Town Health Officer, I called at a house in close proximity to the Assembly grounds, and there found a man who was sick with smallpox. The situation was discussed and it was concluded to remove the patient to a house which was especially prepared for him, situated two miles distant from the Assembly grounds. This was done without any publicity whatever, so as not to alarm the thousands of people who were in attendance upon the Assembly. Those who had been exposed were quietly sought out and were vaccinated and I am glad to say that no more cases appeared.

SPENCER.

August 21—

The Owen County Teachers' Institute, on the three days of August 19, 20, 21, was in session. On the afternoon of the 21st I was invited to address this Institute upon the subject of "School Hygiene." A vote of thanks was received for the address and I believed that not a little good was done for the cause of sanitation in that locality.

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ALBION.

August 26—

On account of a letter from Dr. B. E. Miller, Health Officer of Noble County, which was countersigned by the Hon. John Schimerhorn, Chairman of the County Board of Health, I went to the county named. The letter set forth that smallpox prevailed at Albion and in the surrounding neighborhood and it seemed impossible to correct the wrong diagnosis made by several physicians. It was the desire of the County Board of Health to do all that could possibly be done for the purpose of stopping the disease, but its efforts were greatly paralyzed because of the difference of opinion among the physicians, and also because there were many merchants and others who did not want to have smallpox and, therefore, found it agreeable and to their liking to decide that it did not exist. Upon arrival at Albion, I was met by Dr. Miller and immediately taken to attend a conference of the physicians of the town. After discussion, we agreed in regard to the standards by which we would decide smallpox to exist, and then called upon several cases. All of the cases found proved to be smallpox, and the dissenting doctors, if they did not accept the diagnosis of smallpox, did at least conclude to keep silent. It was announced to the people officially that smallpox existed and that all persons not vaccinated within the last five years should be vaccinated. With Dr. Miller I visited several families in the neighborhood of Albion and on the 27th, visited Wolf Lake, a small settlement about ten miles from Albion. Here smallpox had prevailed in mild form for some time, but at the time of our visit there were several cases which were very severe, one of them dangerously severe. Drs. J. E. Luckey and E. W. Depow are the practitioners at Wolf Lake. Both of these had failed to recognize the mild cases of smallpox and now that it had appeared in severe form, they still refused to call it smallpox, and a dangerous state of affairs existed. Official notice was given at Wolf Lake that smallpox existed and that vaccination must be practiced, and also that strict quarantine would be maintained over every person who was afflicted with any disease even remotely resembling smallpox. At this place we heard of an interesting story where a druggist prescribed for smallpox. The patient appeared at the drug store

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broken out with the disease, and the energetic, live, business man prevailed upon him to buy a bottle of Swift's Specific, a box of cathartic pills and a box of ointment. It is hardly worth while to remark that these remedies had no effect whatever, but the transaction is, nevertheless, interesting. While riding with Dr. Miller two farmhouses were visited where typhoid fever prevailed. This disease is quite prevalent in Noble County and Dr. Miller is making a noble fight against it. It certainly is true that if the people of this county would only take the advice of Dr. Miller to a greater degree they would be richer, healthier and happier.

WINAMAC.

September 1—

Early in March I had promised the County Superintendent of Pulaski County that I would address the Teachers' Institute which would be held in September. On account of our appropriation being almost exhausted, I addressed the Superintendent and told him it would be impossible for me to attend, giving the reasons why. After a delay of several days he wrote, saying that my expenses would be paid. Accordingly I attended the Institute, delivered a lecture upon "School Hygiene," and gave information in regard to the State Board of Health and its workings. A unanimous vote of thanks was given me and I feel confident some good was accomplished. At Winamac I met Judge G. W. Beman, who occupied the circuit bench for Starke and Pulaski counties. I found him deeply interested in health matters and he requested that I make an inspection of Wolf Lake, and also of the city of Knox, and promised that my expenses would be paid. I accordingly went to Wolf Lake, made a thorough inspection of this beautiful sheet of water and offered some recommendations in regard to drainage in the neighborhood, which the County Commissioners took under consideration. At Knox smallpox was found to exist, and what I thought to be proper advice and direction were given in the matter. From there I went to North Manchester, for the authorities of that town hearing that I was at Knox, invited me by telephone to come there. Smallpox had not yet appeared at North Manchester, but cases were known in the immediate neighborhood. My advice to the authorities was that general vac-

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cination be provided for and urged upon the people. This advice was taken and I have since learned that the majority of the people at North Manchester have been vaccinated and, therefore, no outbreak of smallpox is likely to occur at that point.

LYNN.

September 4—

Some two years ago the State Board of Health condemned the schoolhouse at Lynn. At that time the Secretary made a visit to the place and presented an exhaustive survey of the said schoolhouse, and it was upon said sanitary survey that the condemnation was made. There was no opposition to the orders of the State Board of Health and finally, this fall, a beautiful new schoolhouse, sanitary in every particular, was ready for occupancy. I informed the authorities at Lynn that I could not be in attendance at the dedication because our funds were exhausted, and they promptly offered to pay my expenses. Accordingly I attended the dedicatory exercises and made an address upon school sanitation and its benefits. I think the State Board of Health is to be congratulated upon having brought about this great improvement at Lynn.

FOWLER.

September 30—

Smallpox appeared at Fowler about the middle of September. A young man named Harrington, living at Raub, but whose parents resided at Fowler, came to the last named place on account of illness. The disease proved to be smallpox and he was promptly removed by Dr. Mavity, the Health Officer, to the pesthouse, which the town had provided for just such an emergency. There was considerable dispute among the people as to what the disease was, very few of them being ready to accept Dr. Mavity's diagnosis. The father of the young man telegraphed to this Board, asking us to visit the place and decide as to whether or not his son was afflicted with smallpox. My reply was to the effect that we had no money with which to pay expenses and therefore I could not come. A return telegram was to the effect that he would pay said expenses, and accordingly I visited Fowler. As above said, the case was unquestionably smallpox and it was of rather severe type. The family had all been vaccinated and placed under quarantine, and

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with Dr Mavity after visiting the son in the pesthouse, I called upon the family The father was perfectly satisfied with the advice and help which were given him and paid expenses as he had promised.

I wish to state for the purpose of record that during the quarter numerous telegrams, letters and telephone messages have been received requesting aid and advice from the State Board of Health. To all of these the general reply has been returned, namely: "We have no money and we can not therefore perform the functions which the statutes impose upon us." The correspondence has been very large and of the usual character and it indicates that the people have a deep interest in health affairs. They certainly are coming to more and more understand that the services of the State Board of Health are valuable to them.

Secretary Indiana State Board of Health:

Dear Sir—I desire to report the smallpox conditions that I have found in St. Joseph County. South Bend and Mishawaka are the only places where smallpox is prevalent. Mishawaka has twenty-five well-pronounced cases, some of which are the very virulent form. South Bend had, when I was there, two cases, both of them being very light. One death has already occurred in the county, and I predict that two more will die of the disease within a few days.

The situation has been admirably handled by the local Health Officers, Dr. J. W. Hill, County Health Officer, and Dr. D. C. Dresch, City Health Officer at Mishawaka. Forty-two hundred vaccinations have been practiced in a community of sixty thousand people. All school children have been vaccinated, and about three thousand operatives in the various factories. Ropes have been stretched in front of the infected houses, and rigid quarantine has been enforced and guards placed wherever smallpox has occurred. There is a pesthouse about two miles from South Bend, the St. Joseph County pesthouse. It has at present three patients in it; one of these, I predict, will die. So far it is not well equipped, and I have made suggestions to the County Board of Health, all of whom I have met personally, that they should immediately provide necessary articles for the care and maintenance. This pesthouse is situated near the county poor farm, and is without proper sanitary arrangements. Water must be brought from the poor farm well, which is only ninety feet deep, from which about one hundred inmates at the poor farm use, and the sanitary arrangements for their excreta are not at all as would be desired. I have suggested to the County Board of Health that they immediately provide other arrangements, such as a proper cesspool and sewerage connections; also for the pesthouse. I also met the Auditor, who realizes the situation of the county in the matter, and I believe that the County Board of Health will furnish all of the financial aid that is necessary to suppress the epidemic. In all I visited twenty-two of these

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twenty-seven cases in the county, and explained the necessity of prompt and vigorous measures in the prevention of the spread and contagion of the disease.

NELSON D. BRAYTON,
Deputy Health Officer.

DISINTERMENT AND REMOVAL OF BURIED HUMAN REMAINS.

Mrs. Alice Dale, of Daleville, requested permission to remove the remains of her child, dead of diphtheria, which were buried May 12, 1898, said remains to be simply removed from one cemetery to another. The plea was made that her health was precarious and she wanted to see her dead child buried beside her husband. A special permit was granted by the Board to remove the remains of the child in December.

HEALTH OFFICER AT SHELBYVILLE.

The question was raised, who shall be recognized as Health Officer at Shelbyville, pending a decision of the court. The dispute was between Dr. T. C. Kennedy and Dr. Thos. G. Green. After a full consideration it was decided to recognize Dr. Kennedy.

BILLS TO BE PRESENTED TO THE NEXT LEGISLATURE.

The following bills, namely, one establishing a laboratory and entitled "Laboratory," and one relating to quarantine, and entitled "Quarantine," were studied for several hours and the following forms adopted:

LABORATORY.

A bill for an act creating a State Laboratory of Hygiene, providing an appropriation for its establishment and maintenance, prescribing penalties, and repealing all conflicting acts.

Section 1. Be it enacted by the General Assembly of the State of Indiana, That a State Laboratory of Hygiene is hereby established as a department of the State Board of Health, the same to be under the control and management of said Board.

Sec. 2. The State Laboratory of Hygiene shall be located in the State House in Indianapolis, and basement room No. 10 is set aside for said laboratory, and if in time more room is needed, upon application by the State Board of Health, the custodian shall furnish the same.

Sec. 3. The State Laboratory of Hygiene shall be used for making analyses of foods and drugs for the purpose of enforcing the pure food and drug law; for making analyses, pathological examinations and studies in hygiene and preventive medicine, and for no other purpose or purposes.

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All work of the laboratory shall be done exclusively for the benefit of the public.

Sec. 4. The Secretary of the State Board of Health, who is also State Food Commissioner, shall be the director of the State Laboratory of Hygiene, and shall have power, with the consent of the State Board of Health, to appoint and fix the salaries of all employes necessary for the conduct of said laboratory, and for the enforcement of the pure food and drug law, and he shall have power to discharge any of said employes for cause, subject to the approval of the State Board of Health, and said discharged employe shall have the right to appeal to the State Board of Health.

Sec. 5. The State Board of Health shall have power to pass rules for the enforcement of all health and all pure food and drug statutes, and any one violating any of said rules shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than ten nor more than one hundred dollars. Said rules shall be promulgated by being deposited in pamphlet form with the Auditor of each county, and, when so promulgated, shall be in full force. A full account of all work done in the laboratory and work done in enforcing the pure food and drug statutes shall be published in the annual report of the State Board of Health.

Sec. 6. Whenever information is furnished by the State Board of Health, or any other Board of Health, or any member, officer or agent of any such Board to any prosecuting attorney or to any city, town or county attorney, showing violation of the health or pure food and drug statutes, or any violation of any of the rules of the State Board of Health within the jurisdiction of said attorneys, then said attorneys shall promptly bring prosecution as the law commands, but nothing herein contained shall in any wise interfere with or prevent any prosecution for any offense instituted in any manner which is now or hereafter may be provided by law.

Sec. 7. Five thousand dollars, or as much thereof as is found necessary, are hereby appropriated for equipping the State Laboratory of Hygiene with all necessary apparatus, books and appliances, the same to be paid out by certificates from the State Board of Health, and on presentation of such certificates the Auditor of State shall draw his warrant on the State Treasurer for the amount certified; and all certificates shall have attached itemized bills for their face amount, and any unexpended portion of this appropriation shall revert to the general fund within sixteen months from the going into force of this act. For salaries of the employes, maintenance of the laboratory, purchasing of food and drug samples, transportation and hotel expenses of those necessary to conduct inspections, and attend prosecutions, and for necessary incidental expenses, ten thousand dollars per annum are appropriated.

Sec. 8. Any person or persons who shall violate any of the provisions of this act, except as otherwise provided, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined in any sum not less than ten nor more than one hundred dollars.

Sec. 9. All statutes and parts of statutes in conflict with the provisions of this statute are hereby repealed.

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QUARANTINE.

An act to provide for the restriction of dangerous communicable diseases, prescribing penalties and repealing all conflicting acts.

Section 1. Be it enacted by the General Assembly of the State of Indiana, That any physician called upon to attend a sick person, and who finds the cause of such sickness to be of a contagious or infectious character, or if the disease is ordered to be reported in the rules of the State Board of Health, such physician shall immediately report the facts to the Secretary of the Board of Health having jurisdiction.

Sec. 2. Whenever any person knows or has reason to believe that any member of his family or household (boarder, roomer or visitor) has either smallpox, diphtheria, membranous croup, scarlet fever, measles, or any other communicable disease listed in the rules of the State Board of Health, he shall within twenty-four hours from the time the existence of the disease is known, if no physician is in attendance, give notice thereof to the local officer of the town or city in which the disease occurs, or the County Health Officer if the case is without the corporation of cities or towns, and such notice shall be given either verbally or by written communication mailed or delivered within the time specified.

Sec. 3. The Health Officer having jurisdiction, upon being notified in any way of the existence of either of the four diseases named in Section 2, or of other diseases which are or may be listed in the rules of the State Board of Health, shall immediately, in person or by deputy, quarantine the infected house, rooms or premises, so as effectually to isolate the case, and the family if necessary, in such manner and for such time as may be necessary to prevent transmission of the disease; and, whenever a house, tenement, or room is placed in quarantine, a placard shall be posted in a conspicuous position, giving the name of the disease in letters not less than two inches long, and also containing the following quarantine order: "All persons are forbidden to enter or leave these premises without special permit from the Health Officer having jurisdiction, and all persons are forbidden to remove or mutilate this card without orders from said Health Officer, and, when visiting persons afflicted with smallpox, diphtheria, membranous croup, scarlet fever or other infectious diseases named in the rules of the State Board of Health, all physicians and Health Officers shall take such precautions as are directed in the rules of the State Board of Health covering this matter. The penalty for violating any of the provisions of this section shall be ten dollars fine or imprisonment for ten days, or both, as the court decides."

Sec. 4. Immediately after the recovery or death of any infected person or persons, the Health Officer having jurisdiction shall cause the infected premises to be thoroughly disinfected and cleansed according to the methods prescribed in the rules of the State Board of Health, after which the said premises shall be released from quarantine.

Sec. 5. No parent, guardian, person or persons having the custody of any child shall permit such child, if infected with any communicable disease, or if it has been exposed to such, to attend any public or private school, or appear in public in any way, and all school teachers, public, pri-

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vate or parochial, shall exclude from their schools all such children unless a written permit is given by the Health Officer having jurisdiction.

Sec. 6. It shall be the duty of the Secretary, or a representative of all Boards of Health, to attend a meeting of the State Board of Health, when requested by the latter, for consultation or conference concerning the restriction and prevention of contagious and infectious diseases, or for the consideration of other important sanitary matters, and the expenses of the delegate shall be paid by his Board.

Sec. 7. It shall be unlawful for any person having pulmonary tuberculosis to be employed as a teacher in any public, private or parochial school, and the State Board of Health, any County Board of Health and any local Board of Health, or a majority thereof, shall have power to remove, or cause to be removed, from any hotel, boarding house, boarding school or other building of like character, tenement or apartment houses, to a proper place designated by such Board, persons sick with any contagious, infectious or pestilential disease, and such Boards shall also have power to remove, or cause to be removed, to a proper place to be so designated, all things and articles within the jurisdiction of such Boards, which, in their opinion, shall be infected with any matter likely to communicate disease to the inhabitants of any county or other municipality of this State, and said Boards may destroy, or cause to be destroyed, such articles and things, when in their opinion the safety of the public health requires it: Provided, however, That no person shall be removed under this act, except after examination and determination by two physicians in good standing and practice that such person is sick with a contagious, infectious or pestilential disease. The Boards of Health above mentioned may, by resolution, delegate the authority herein conferred to any Health Officer in the employ of such Boards.

Sec. 8. Whenever a Health Officer shall know or suspect or be informed of the existence of any communicable disease dangerous to the public health, and there be no physician in attendance, or should any physician while in attendance fail or refuse to immediately report such case to the Health Officer, it shall be the duty of said Health Officer, or deputy, to examine such case or cases of alleged communicable disease dangerous to the public health, and act as required by the rules governing such cases of communicable diseases.

Sec. 9. In all cases of death from cholera, bubonic plague, leprosy, typhus fever, yellow fever, smallpox, diphtheria, membranous croup, scarlet fever and cerebro-spinal meningitis, the funeral shall be strictly private, and the burial shall be made within twenty-four hours after death. No public or church funerals shall be held, or any person permitted to enter the house containing the remains, excepting the undertaker and his assistants, unless by permission of Health Officer.

Sec. 10. All trolley or steam cars or other public conveyances which are known to contain the infection of any disease, or any such cars which may reasonably be supposed to contain such infection, shall, upon order of the State Health Officer or any Health Officer in whose jurisdiction the infected car may be found, be disinfected according to the rules of the State Board of Health, and the cost of disinfection shall be paid by the company owning said cars. If at any time any city, town or region is

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under quarantine, all trolley and steam railroad companies passing through any such quarantined city, town or region shall obey the quarantine orders of the State Board of Health which are issued for the purpose of preventing the spread of infection. Each violation of such orders shall be a separate offense, for which a fine of one hundred dollars shall be assessed.

Sec. 11. The expenses incident to disease prevention shall be paid by the cities and towns in which the work may become necessary, and, when without the corporation of cities and towns, said expenses shall be borne by the county. If at any time the authorities of any county, city or town fail, neglect or refuse to enforce the statutes and the rules of the State Board of Health for the restriction of dangerous communicable diseases, then the State Board of Health, if in its opinion it becomes necessary, shall take charge and enforce the law and the rules, and all expenses shall be paid by the county, city or town in which such enforcement becomes necessary.

Sec. 12. Any person who violates any provision of this act, or any rules or regulations of the State Board of Health for the enforcement of this act, except as otherwise provided, shall be punished by a fine of not less than ten nor more than one hundred dollars.

Sec. 13. All acts and parts of acts inconsistent with this act are hereby repealed.

The manuscript of the Annual Report for 1901 was reviewed and discussed and finally approved, and it was

Ordered, That the manuscript of the Twentieth Annual Report, as amended and approved, be sent to the Printing Board.

REPORT FOR 1902 ON STATE MEDICINE AND HYGIENE.

By J. N. Hurty, M. D., Indianapolis.

State Medicine. The Legislature has not been in session since the last report was made, and therefore there are no changes to record in the various laws relating to State Medicine. There has been some litigation in the lower courts in various parts of the State under the Medical Law, the Pharmacy Law, Food Law and Health Law, but not under the Dental Law. The Supreme Court has made final decisions in two instances under the Medical Law, in one instance under the Food Law, and in two instances under the Health Law, as follows:

Hurley vs. Eddingfield. This case came from Montgomery County. Dr. Eddingfield was applied to to render medical service to Mr. Hurley, who proffered the usual fee. Dr. Eddingfield refused to respond, giving no reason for refusal. The suit was

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by the heirs of Hurley and for $10,000 damages, they alleging that Hurley's death was due to the refusal and neglect of Eddingfield. The court decided that there is no obligation on the part of physicians to enter into a contract contrary to their will. In other words, physicians do not have to treat the sick unless they want to,

Baker vs. Hancock. In this case Henry W. Baker sued Dr. George S. Hancock for damages on account of malpractice and wrong diagnosis, and is interesting as deciding the legal status of a specialist. The complaint was upon the hypothesis that Dr. Hancock did not exercise that degree of skill required of his profession. No charge of unskillfulness or lack of education was made in the complaint. In the lower court the decision was in favor of the doctor, but the Appellate Court reversed. In its judgment the court says:

"It is averred in two paragraphs of the complaint that the appellee 'was making a specialty of the treatment of cancer, and held himself out to the public as a specialist in the treatment of said disease of cancer, by advertising in the public press and by other public notices thereof.' A specialist, as the term is here used, is understood to mean a physician or surgeon who applies himself to the study and practice of some particular branch of his profession. Scientific investigation and research have been extended and prosecuted so persistently and learnedly that the person affected by many forms of disease is of necessity compelled to seek the aid of a specialist in order to secure the results thereof. The local doctor, in many instances, himself suggests and selects the specialist whose learning and industry have given him a knowledge in the particular line which the general practitioner, in rural communities especially, has neither time nor opportunity to acquire. Small vs. Howard, 128 Mass. 131. Being employed because of his peculiar learning and skill in the specialty practiced by him, it follows that his duty to the patient can not be measured by the average skill of general practitioners. If he possessed no greater skill in the line of his specialty than the average physician, there would be no reason for his employment; possessing such additional skill it becomes his duty to give his patient the benefit of it. The appellee, if he held himself out as a specialist in the treatment of cancer, was bound to bring to the discharge of his duty to

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patients employing him as such specialist that degree of skill and knowledge which is ordinarily possessed by physicians who devote special attention and study to the disease, its diagnosis and treatment, having regard to the present state of scientific knowledge. This is the degree of skill which, by holding himself out as a specialist, he represented himself to have; and it does not lie with him to assert, after securing employment and compensation on that basis, that his representation was not true. The instructions given by the court upon this subject did not correctly express the law. The judgment is reversed and cause remanded, with instructions to sustain motion for a new trial and further proceedings consistent herewith."

MARTIN VS. BOARD OF COMMISSIONERS OF MONTGOMERY COUNTY.

Appellate Court, June 18, 1901.

This case is of interest to physicians, for it decides that the Secretary of a County Board of Health can not employ physicians in the name of the county for health work, nor can he directly abate nuisances, for both of these powers belong to Boards of Health and Secretaries are simply executive officers. Physicians, in order to collect at law for services rendered a county, must show a valid contract with the Commissioners, or must show a law providing for such services and providing compensation.

State vs. Beil, 157 Ind. 25. In this case the Board of Health of Bluffton had ordered, as a health measure, the School Board to have all the school children vaccinated, upon penalty of exclusion from school. The School Board refused to act and mandamus proceedings were brought in the Wells County Court. E. C. Vaughn, Judge, refused to issue a mandamus and the Supreme Court decided that he erred and commanded that the mandamus be issued. This does not decide, since the passage of the Louttit amendment to the school law, that Boards of Health have power to enforce the vaccination of school children, for this decision comes under the old law before the passage of said amendment. It will be necessary to have yet another case before the Supreme Court to settle the status of the Louttit amendment.

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Isenhour vs. State of Indiana. This case was appealed from Marion County to the Supreme Court and the judgment of the lower court was sustained. This case involved the question whether or not the Legislature could give the power to the State Board of Health to pass rules and ordinances fixing food and drug standards and specifying adulterations. In regard to this matter the court says:

"The law says the State Board of Health 'shall prepare rules and ordinances when and where necessary, regulating minimum standards of foods and drugs, defining specific adulterations and declaring the proper methods of collecting and examining drugs and articles of food.' From this provision it is agreed that in substance this is an attempted delegation of legislative power to the State Board of Health. The obvious purpose of the provision last quoted was to commit to a body of learned and scientific experts the duty of preparing such rules, and prescribing such tests as may from time to time, in the enforcement of the law, be found necessary in determining what combinations of substances are injurious to health, and to what extent, if at all, adulterations, or deteriorations of foods and drugs, may go without injuriously affecting the health of the consumer. That which is required of the State Board of Health has no semblance to legislation. It merely relates to a procedure in the law's execution for a reliable and uniform ascertainment of the subjects upon which the law is intended to operate.

PROGRESS IN SANITARY SCIENCE.

The progress of sanitary science for the past year has kept pace with previous years. The most prominent advance is the final proof in Havana, by destroying mosquitoes and their larva, that yellow fever may be controlled. That yellow fever is distributed solely by insects, principally mosquitoes of a particular variety, namely, Stegomyia fasciata, has been further proven by exact experiments conducted in Cuba by Drs. Walter Reed, Jas. Carrol and Aristides Agramonti.

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SANITARY CONGRESS.

The International Sanitary Congress, in session in the City of Havana, February 15 to 20, 1902, advocated the formation of anti-leprosy leagues, under the patronage of the government therein represented, with the object that the people be educated in every possible way of the progress that the disease is making and the methods of preventing its increase.

The Congress further advocated that knowledge concerning how malaria is propagated should be spread among the people, and especially should it be imparted to school children. It was also advocated that the American Republics establish leagues against tuberculosis similar to those existing in some of these Republics and in the Island of Cuba, with the object that that with a united effort, the propagation of the disease would be diminished.

SCHOOL SANITATION.

The medical inspection of school children for the purpose of eliminating those who are diseased and thus prevent school epidemics, is no longer counted an experiment. Its efficacy is thoroughly proven and it now remains for those school authorities who desire to save school moneys and promote the public happiness to install as quickly as may be, the medical inspection of school children. At no place in Indiana is medical inspection of school children practiced, but there is great progress in the matter of erecting sanitary schoolhouses. To aid all that is possible in this most important matter, the State Board of Health has had plans and specifications prepared for a one room sanitary schoolhouse, and these are furnished, free, to all trustees who will accept them. At this date 33 of these plans have been distributed. There is no need for delaying in this work, and it is therefore recommended by your committee that a law should be passed requiring that all schoolhouses built after the going into effect of the law shall conform to all sanitary requirements, and said requirements should be carefully laid down in the law. Such a law could be made self-enforcing by simply adding a section making invalid all bills incurred by authorities in constructing buildings which did not conform to the legal requirements. The urgent necessity of such a

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law appears from the fact that many schoolhouses exist where the children have their feet frost bitten while sitting at their desks in schoolhouses, where also bad lighting and bad ventilation cause malnutrition, nervous disorders and diseases of the air passages. Probably 60 per cent of the schoolhouses of Indiana are so unsanitary as to cause a loss of 20 per cent. of the school moneys, inasmuch as these unsanitary buildings, through their depressing and ill-health causing influences, prevent study and progress of the pupils.

HEALTH OF THE STATE.

The State Board of Health now secures very accurate mortality statistics, but the morbidity statistics are as yet very imperfect. In order to secure a more or less reliable expression of the extent of illness, the State Board of Health sends each month to every county, what are called disease prevalence cards. These cards are filled and returned by Health Officers and the information thus gained, taken together with the facts concerning deaths, furnish a means of determining the health of the State. In 1900 there were reported 35,453 deaths, a rate of 14.08 per 1,000. In 1901 the reports gave 36,544 deaths, a rate of 14.52. By this comparison, there being 1,091 more deaths in 1901 than in 1900, the health of the State was therefore worse in the former year than in the latter. But this is subject to error, for it is plainly possible to have an increase in total sickness with a decrease in deaths as between certain periods. In this instance, however, the morbidity data for the two years shows more sickness in 1901 than existed in 1900. The two sources of information, therefore, force the conclusion that both sickness and death were greater in 1901 than in the preceding year. The following table shows the total deaths, rates and classification according to the Bertillon system.

Note.—The table referred to will be found on page 125 of the report for 1901.

SMALLPOX.

The most prevalent, highly infectious disease since the last report, excluding tuberculosis, pneumonia and diarrhœal diseases, was variola. One year ago attention was called to the fact that many physicians were unable to diagnose atypical smallpox, and persisted in calling it chickenpox, even when it became virulent

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and typical among adults. It thus happens that probably as many cases of variola escaped being reported as were reported. The total number of cases reported for the twelve months ending April 30, 1902, was 8,664, or an average of 722 in each month. The total deaths reported as directly due to smallpox was 21, making only 0.24 per cent. There is much evidence pointing to the conclusion that not a few smallpox deaths were reported as due to other causes, and it is also known that many cases of smallpox were complicated with pneumonia, and so smallpox was the chief but not the immediate cause of death. For the reasons given, the real extent and mortality of this disease in Indiana will never be known; and our records must simply say, smallpox, mostly in a typical form and mild, with astonishingly low mortality, prevailed throughout the year. The disease has, however, cost the people enormously. When in severe form, which was probably in about 16 per cent. of the instances, the patient lost not less than three weeks' time, and in hundreds of instances townships have been called upon to furnish medical attendance and necessary supplies. Added to this is the loss to business on account of alarm, and also the cost of imposing quarantine and disinfection. At the lowest estimate the cost to the State could not have been less than $2,000,000. With rare exceptions the health authorities have not had the support of the people in the efforts put forth to stay smallpox. In only eight counties out of the 65 invaded has it been possible to secure appropriations from the County Councils, to be used for fighting infectious diseases. The greater proportion of cities and towns have acted promptly in furnishing means for putting out the fire, but a few, suffering from stupid government, have done nothing. The State Board of Health has been called upon for aid and direction 276 times, but it has such meager funds, and there being only one State Health Officer, it has only been possible to reply in most instances by letter and with a few smallpox circulars. Had a few thousand dollars been available for fighting smallpox when it first appeared, and had the people lent an attentive ear to wholesome preventative instructions, fully one million and a half of the two millions of dollars lost could have been saved.

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TUBERCULOSIS.

Far worse, and far more expensive than smallpox, is the ever present white plague. In 1901 this awful disease caused 4,645 deaths. Of this number 3,364 were from the pulmonary form. The following table shows the deaths from all forms of tuberculosis for 1900 and 1901:

Tuberculosis Of	1900.		1901.	
	No. of Deaths.	Death Rate per 100,000.	No. of Deaths	Death Rate per 100,000.
Lungs	3,364	133.6	4,169	163.5
Meninges	173	6.8	153	6.7
Peritoneum	109	4.3	187	7.4
Skin	.....	.....	.....	.....
Other organs	127	5.0	60	2.4
General	872	34.6	79	3.1
Total tuberculosis deaths	4,645	184.3	4,648	179.7
Total deaths from all causes	35,516	142.0	36,544	145.2

It appears from the above figures that in 1900 13.07 per cent. of all deaths was from tuberculosis, and in 1901 the percentage was 12.55, or expressing the conditions in another way, tuberculosis caused one in every 7.6 deaths in 1900, and one in every 7.9 in 1901.

The second table shows the deaths by months for the two years.

	1900.			1901.		
	Pulmonary.	Not Pulmonary.	Total.	Pulmonary.	Not Pulmonary.	Total.
January	300	117	417	368	20	388
February	300	122	422	390	49	439
March	318	136	454	388	42	420
April	339	116	455	408	40	448
May	266	139	405	378	39	417
June	301	93	394	310	37	347
July	244	138	382	349	44	393
August	271	121	392	354	49	403
September	212	131	343	266	43	309
October	274	92	366	302	47	349
November	248	68	316	321	35	356
December	291	108	399	335	34	369

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In both years April shows the most deaths from pulmonary tuberculosis, and the total deaths from all forms of tuberculosis were also greatest in April. September shows the least number of deaths from the pulmonary form in 1900, and October the least in 1901.

The third table shows the deaths for the two years from pulmonary tuberculosis by ages.

PULMONARY TUBERCULOSIS BY AGES FOR THE YEARS 1900 AND 1901.

Year.	0.	1.	2.	3.	4.	5-10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65-70.	70-75.	75-80.	80—	N. R.	Total.
1900...	43	13	9	3	3	31	59	318	543	491	338	289	252	199	158	155	131	113	92	50	29	45	3,364
1901...	76	35	14	12	7	28	84	389	676	559	490	356	287	223	174	166	182	148	105	73	39	46	4,169

This table shows that deaths from tuberculosis begin to rise rapidly at 15 years of age and reach a climax at 25. From 27 to 30 it is almost equally destructive and begins to decline at 45. The fact that the disease causes the most deaths from 20 to 25 indicates that school life, which is just over, is a causative factor. Foul air being the first and greatest cause of consumption, and as so many schoolrooms have foul air from lack of ventilation, it seems reasonable to believe that the schools play a not insignificant part in producing consumption.

There is no State hospital or sanatorium for consumptives in Indiana. The facts and arguments for such an institution are overwhelming. There are 1,013 townships and 95 poorhouses in the State. There is an average of two consumptive patients in each poorhouse, a total of 190. On the average there is one consumptive in each township being cared for by township relief. At the lowest estimate, therefore, there are 1,200 consumptives being cared for all the time in Indiana. Every one of the patients will die, will be buried at public expense, and will infect the house he occupied. If the deceased is a parent, children will almost certainly be left to be cared for at the public expense. If all of these were cared for at a State sanatorium, 25 per cent. would be cured and preserved to their families.

As to sex, the pulmonary tuberculosis deaths are divided as follows: Males, 1,705; females, 2,464. The percentages are,

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females, 59 per cent.; males, 41 per cent. Of the females who died of pulmonary tuberculosis in 1901, 1,353 were between the ages of 15 and 35. Eighty-two per cent., or 1,109, were mothers. Counting an average of two children to each one, there was, therefore, produced by tuberculosis in 1901, 2,218 orphans, and many of these have become public charges. This phase of the tuberculosis question is certainly most important, for the necessary making of orphans is bad business.

To this date no society for the prevention of tuberculosis has been organized in Indiana, but the State Board of Health, the Allen County Medical Society, the Huntington County Medical Society, the Marion County Medical Society, the Wayne County Medical Society and the Delaware County Medical Society, have all urged through official resolutions that a State sanatorium for indigent consumptives be established by law.

TYPHOID FEVER.

Typhoid, the fifth disease, caused 1,198 deaths in 1901, and by lowest estimate there were 15,000 cases. Large as the figures are, they record an improvement over the preceding year, when there were 1,320 typhoid deaths, and at least 17,500 cases. We think it probable that this disease will continue to decrease, for the people are now quite generally alive to the fact that the infection is borne to them in water. The fact that typhoid is water borne was at first the target of paragraphers, and the exponents of the truth were termed cranks; but now all know the truth, and by this standard, all are cranks.

The State Board of Health each month sends to those houses which have suffered death from typhoid fever a pamphlet upon the subject, which gives an account of the cause of the disease and its prevention in plain language.

DIPHTHERIA.

The diphtheria deaths are decreasing. In 1900 this disease caused 686 deaths, and in 1901 the number fell to 554. This is a decrease of 19.2 per cent. It is likely the greater proportion of this decrease is due to the increasing use of antitoxin, but some of it is certainly due to better care of children by parents, and

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greater care in the schools. By ages, diphtheria was most destructive in 1901 between 5 and 10, and November was the most fatal month.

MISCELLANEOUS 1901.

The three well-known children's diseases, namely, whooping-cough, measles and scarlet fever, killed a total of 491, as follows: Whooping-cough, 181; measles, 161; scarlet fever, 181. The most feared of these maladies, scarlet fever, was the least fatal. Cancer as a cause of death is close to typhoid fever, as there were 1,165 deaths from cancer and 1,198 from typhoid fever. Diabetes caused 204 deaths, acute articular rheumatism 103, and anaemia and chlorosis, 789.

Diseases of the nervous system and organs of sense caused a total of 4,494 deaths.

Diseases of the circulatory system caused 2,328, and diseases of the digestive system caused 4,585. It is probable that less strenuosity of life would reduce the deaths from the above causes.

Lastly, old age caused 1,265 deaths, which is only 3.4 per cent. of the total.

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REPORT

OF

Conference of Health Officers

Held at Indianapolis, Ind., April 25, 1902.

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REPORT OF CONFERENCE OF HEALTH OFFICERS.

There were present at the conference, besides the Health Officers of the counties and some of the larger cities of Indiana, the President and Secretary of the State Board of Health of Ohio, and the President and Secretary of the State Board of Health of Kentucky.

The meeting was called to order by Dr. J. N. Hurty, Secretary of the State Board of Health of Indiana.

Dr. Hurty: I think you all understand from the circular that we were to do without a set program this year, and make the central object of the conference the discussion of smallpox. I regret that the Secretary and President of the Illinois State Health Board can not be with us. They were invited to attend, but were unable to come.

I propose, if it is the wish or will of the conference, that we call one of our number to the chair and start the discussion. Here is a program which will be distributed. I move that Dr. Bence, of Putnam County, take the chair. The motion was seconded and carried, and Dr. Bence took the chair.

Dr. Bence: The best we can do is to call for discussion on the topics that we have here. The first topic is:

"The Present Epidemic of Smallpox; Its Extent and Continuance."

We would like to have some one who is informed start the discussion on this subject. I think Dr. Hurty had better start it.

Dr. Hurty: I would very much prefer to hear some one else on that subject. I think Dr. Probst, Secretary of the State Board of Health of Ohio, is the best informed man on that subject of any one I know.

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Dr. Probst: If Dr. Hurty will kindly give us something on the extent of the present epidemic, I will give some account later.

Dr. Hurty: I am not well prepared. We do know that smallpox appeared in the United States shortly after the return of the soldiers from Cuba. Exactly where it started I have been unable to learn, but think it was in the South somewhere. I remember that Dr. Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, predicted the coming of this smallpox, and he even went so far as to say that it would probably start near the mouth of the Mississippi River, follow the course of the Mississippi north and then strike up the Ohio River, and with that beginning spread well over the United States, he could not tell how far. It was a rather remarkable prophecy, for, if I am correctly informed, it was fulfilled almost completely. I do not know that the first smallpox appeared in Mississippi, but I do know that very early in the history of the invasion it appeared there, and that it did come up the great waterway, and appeared in Indiana and Ohio almost simultaneously. In the beginning the correct diagnosis was not made down there, just as was the case in Indiana, and in fact in all the States where it has appeared; and it was not until a few deaths had occurred and the disease manifested itself in the most pronounced form that all people agreed that it was smallpox. That is something to be remarked upon. I understand it was in that region where the term "Cuban itch" was first applied by the ignorant negroes of the south; and it seems strange that an educated profession like medicine should have seized upon that nomenclature so swiftly and used it so extensively as it did. It served a certain purpose, and that was to blind us to what smallpox really was for a long time. I have heard the term "Cuban itch" used within the last forty-eight hours.

Well, as predicted, the disease marched straight up the great Mississippi, and it spread west and it spread east. Some of the cases, of course, came on the Atlantic seaboard and all along on the Gulf Coast, but they seem to have been the pronounced cases. The first known and marked case appeared in Indiana in January of 1899. I think it appeared in Ohio before that time, sometime in 1898.

Dr. Probst: It appeared in Ohio in April of 1898.

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Dr. Hurty: The first case that was positively recognized in this city appeared during the session of the Legislature in January, 1899. We found out afterwards that it had been prevailing in the southern counties eight months or possibly a year earlier than that. It is now in almost every State in the Union. Those who receive the Marine Hospital reports, have probably kept track of it. One State after another has been invaded, and one part of the State after another. By the last Marine Hospital report we find there were more cases and a greater area covered by the disease in March than ever before. I know that in Indiana we have had a steady increase of the disease. We have been getting better reports all the time, but not perfect reports, and I am inclined to believe we will find it in its nonrecognizable forms in almost every county in the State.

I have given you about all the information I have, namely, that it is all over the country; that it is very abundant; and that the Marine Hospital reports show that it is on the increase, and the reports of Indiana show that it is on the increase. Its extent is very great, and its distribution is quite comparatively even. Over at Plainfield, Ind., yesterday, was discovered a remarkable instance. I have just made the statement that possibly the disease is in all the counties of the State, and I have much information and many facts in my possession upon which to base that statement. I was speaking of the Plainfield case. About six weeks ago a colored boy came there from Grant County. He was sick for a couple of days, vomited a little, had headache and a little fever, that a few inconsequential eruptions; that was all. He was dismissed from the hospital. Dr. Carter attended him, and I think no one could have told that it was a case of smallpox. Now, within eighteen days from that time the boys have gone down by the twos and threes. Yesterday when I was there two boys were brought in suffering with headache and backache. Others were already broken out with smallpox, one in the pustular stage. We now think the epidemic came from the first case mentioned. The other cases are very like it, only more intensified. The only mistake that was made there was in not having all the boys vaccinated. That was not the fault of the physician, however.

Smallpox is going to continue until every bit of combustible

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material is burned up. I don't see how it can be otherwise. Ninety-five per cent. of the susceptible persons must have this disease. It will not leave the State until that happens. Of course you know there are two ways of becoming immune—three ways, possibly. There are some who have natural immunity. Those who have had the disease will be more or less immune, though some people may have it twice or three times, just as a vaccinated person may have it in a mild form. Those, however, are rare cases. But the country must gain immunity from having had the disease or from vaccination. I know of no other way in which it can be stopped. So I confidently predict that it will continue until the conditions outlined exist; that is, until all have received protection, either by vaccination or by having had the disease.

Dr. Stanton, President State Board Health of Ohio: The disease had prevailed for some time before the war was declared, or had prevailed for some time in Ohio before our soldiers were near Cuba. The disease began in one of the Southern States before any soldiers were sent to Cuba; before that time they had had cases in Alabama. The first case in Ohio was in the town of Carroll. A man was brought there who had traveled in the Southern States. The next outbreak was at Put-in-Bay, in one of the hotels there. The disease was brought there by negroes who had been brought from North Carolina. The next outbreak in our State was among the members of a traveling show; there were negroes from the South in the company. We have had at least three different outbreaks in Ohio, coming all of them from the South, and all of them before the soldiers returned from Cuba. The name of "Cuban itch" was given it after the disease had prevailed for some time. The disease was extremely mild from the first case, as it had been in the South. The reason why smallpox diagnosis was not given to it was because it was so mild. The disease had existed for a year before war with Spain was declared. I think the source or origin of this disease can not be traced to Cuba.

Dr. Probst, Secretary State Board of Health of Ohio: The first outbreak in Ohio was very interesting to me, as it was the first contact I had with this form of smallpox. As stated by Dr. Stanton, a man who had been traveling in the South came back to a little village and was taken sick. The attending physician pro-

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nounced the disease "black measles." Four or five young children in the family contracted the disease from him. Those cases were diagnosed as chickenpox. The children were not sick enough to go to bed, and the physician, who was a very capable physician, could not comprehend that these were cases of smallpox—neither could I. But from these children an adult contracted a severe case of smallpox.

The extent of this first introduction of the disease into Ohio, as we have had it reported to us, is between twelve and thirteen thousand cases since April, 1898. It has visited all of our counties. During the last three months we have had about 840 cases reported in the State. I would put some emphasis on the word reported, because I have every reason to believe there are a great many cases that are never reported. It is our constant experience to be called upon to investigate smallpox, and when we try to trace it backward we find that probably it has been prevailing in a community for two or three months under some other name. It is a condition we have to consider in making up our minds as to what is likely to be the extent of the spread of this disease. I feel certain the disease will continue. I know of but one remedy that could apply to the present situation, and that is the remedy of general vaccination. I think, as far as Ohio is concerned, it is a remedy that can not be applied. The people will not be vaccinated. Ordinarily when smallpox prevails in its severe form, and the people are dying here and there, it is not a difficult matter in that particular community to secure quite general vaccination; but with the present form of the disease it is practically impossible to get a very large per cent. of the people to be vaccinated, so I think we can look for a continuance of the disease for many years to come.

I noticed recently the report of the Tennessee Board. I was surprised at the large number of cases reported in that State. For the year ending February 19, 1902, there had been 13,106 cases, with I think 276 deaths in the State of Tennessee; more cases in that one year, I think, than we have since the epidemic began in Ohio.

Dr. Cowing, Muncie, Ind.: The fact is very evident, I think, to all of us that we are facing quite a problem today in the small-

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pox situation. From our own experience at Muncie and in Delaware County in the last twelve years we believe that smallpox has come to stay. It comes in upon us from various points of the compass, and after we have stamped it out in our own county, it comes in again from adjoining counties. Not long ago Dr. Spickerman, our City Health Officer, had to deal with a case that came from Tennessee, in a colored family. Shortly after another case developed in the western part of our county. This case came from Nebraska. A young man came into the city on the interurban cars with a well-developed case of smallpox. We isolated him and stopped the disease at that point. Not long after that we found some cases that came down from another part of the State. The history has been with us locally that the disease comes in upon us from all quarters. In spite of all our precautions we find the same infernal disease that in 1893 killed twenty-three people out of 150 who had it, creeping into our midst. As I have said, in some instances, to those who think it is nothing but some mild trouble, if we look closer we see the claws of the beast in every case. We can see the same old features every time; they are a little disguised, but they are there, and they have come to stay.

It seems to me that until we can train public sentiment and train physicians to diagnose the cases we will have to encounter the disease. It seems to me that a school for physicians where the diagnosis of this particular disease might be presented to them, in the form it is now appearing, should be established. It would be a great help to the physicians in localities where they have not recognized it. But a few days ago Dr. Hurty came to our city and greatly aided us in making a diagnosis for five physicians in one locality where I was unable to convince them we had smallpox, and plenty of it. Until those physicians were convinced, nothing could be done to get their co-operation. This is doubtless the experience in other States. I believe this disease will continue until we have convinced physicians that we have the disease we had years ago that killed so many of our people, only it is in a milder form. In our county we are well prepared to handle smallpox. The epidemic of 1893 cost the city a great deal of money and did a great deal of damage to business in general. I think this conference to consider the future spread of the epidemic is very timely

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and very important, and it certainly gives me great pleasure to meet Dr. Stanton, who is one of my old professors, and Dr. Probst, whom I have met in the State Board of Health of Ohio.

TOPIC No. 2.

"Shall the present epidemic be dealt with as radically as if the death rate was 15 per cent?

Dr. Commons, Union City, Ind.: I have had one experience with this epidemic. Beginning with Dr. Cowing's epidemic in Muncie and Delaware County in 1893, and continuing up to the present time I have managed to keep it out of our town until last November. We stamped it out between November 1st and December 21st, but the infernal thing came in again. That seems to be its disposition. It bobs up in unexpected places and under unexpected circumstances, and you never know where you are going to meet it. If we take Dr. Hurty's decision in the matter, and Dr. Probst's, that the thing is here to stay until the material is burned out, why not let it go and have one great conflagration and be over with it, and then have some peace? It is disrupting our social relations among the profession in some cases. Since December, 1861, I have been mixed up with smallpox, and I never got into an epidemic but that there was a doctor's quarrel before we were through with it. Although the animosity over the cases in Union City has died out, we still have smallpox; in fact have one case now.

I suppose this is to be an experience meeting. With the smallpox in Muncie and Delaware County in 1893, it certainly was there for some time before it was recognized. I saw a case that came directly from Muncie on the 11th day of May, 1893, and I saw it within an hour after it arrived in Union City, and I was convinced it was smallpox. I telegraphed to Dr. Cowing, and he said he knew nothing of anything of the kind in Delaware County. The case was secluded, and placed in charge of the child's grandmother, an old lady who had had smallpox. The case was not severe. I tried afterwards to vaccinate the child, but could not accomplish it. Then the disease slipped into what is called "The Settlement," nine miles south of Union City. We quarantined

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the whole district. A family of American citizens of African descent had come into the place from Muncie, and one of the children became infected with smallpox. Two cases resulted from this almost immediately and both died, one before the eruption appeared, the other had confluent smallpox and died the fifteenth or sixteenth day of the disease. Two others had it in mild form. The district was vaccinated, and there was no further spread of the disease. The house in which it originated was burned. It has appeared in the vicinity of Union City several times. It reached Winchester, but they succeeded in stamping it out at once. Last August a young man came from Mercer County, Ohio, where he had been drilling oil wells. He had Cuban itch, so-called. A physician saw him when he was in the fever stage. He had a high fever and was suffering a good deal of pain. The physician said he was coming down with typhoid fever. About the fourth day he was free from fever, and the eruptions began to appear. The physician said he had broken up the fever, and had done it so quickly it kept the poison in his system, and his patient was having eruptions on his skin in consequence. That man was not seen by any other physician. He was living with his father's family. The physician was attending a member of a family in the neighborhood. The hired girl in this family had called to see the young man while he was sick, and either she or the doctor carried the disease to that family. A lady and a little child were sick, and this same physician attended them. The young woman began to be indisposed and went to her home in Jay County, and there the disease came under another doctor's notice. I knew nothing of these circumstances until a little girl came to school one morning and said her grandmother had smallpox. I was notified, and started out to hunt the grandmother up. I found that she was on the Ohio side. I went to the attending physician, and together we investigated the matter. The physician said the old lady had typhoid fever, and he had been successful in breaking it up, but that the patient had broken out. When I saw her I knew she had smallpox, and notified the physician over there. Soon there were sixteen cases. A quarantine was then established. Five physicians went over from the Indiana side on invitation of the Health Officers, and they diagnosed the case as impetigo contagiosa, and scared

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the people nearly to death, until they were told that it was smallpox. However, they took off the quarantine. I told them when it came on our side it was smallpox, and they might call it impetigo contagiosa, or whatever they liked, and if we could not do anything else we would quarantine against the whole town. Then Dr. Probst and Dr. Hurty came, and they at once pronounced the disease smallpox, called the Board of Health and the Council together and read the riot act to them. Then the quarantine was put on again. But among the six members of the Health Board there were six different opinions, and the quarantine was soon taken off. They had that disease in Union City, Ohio, all winter.

Now, if we take the suggestion of the State Health Officers that the thing is going to continue until the material is all burned out, I say let it go and let us get through with it. But if we are to act judiciously we should quarantine every case and destroy it, no matter how mild it was. Then we should try to influence legislation so as to remove the restrictions that prevent compulsory vaccination. My experience is that vaccination is just as good a protection against smallpox as a previous case of the disease. Make vaccination compulsory, and soon there will be no such thing as smallpox in the world any more.

Dr. Carl Proegler, Fort Wayne, Ind.: We are not going to speak of a diagnose of smallpox; we are going to find and know whether we are going to have any measure that is radical enough. I say the measures ought to be as radical for a mortality of two per cent. as for a mortality of fifty per cent. You can only be radical enough when you have a strict surveillance of all cases, and have physicians in charge who have stamina enough to call the disease by its right name. There have been epidemics of smallpox of mild form as long back as we have records. They used to call it the "pest" or "plague," and when that was dying out the smallpox came in virulent form. We are going to reach that stage if we do not do something radical. When it comes to that stage we will have a havoc of deaths; and this will come in a couple of years if we do not go to work.

Dr. A. W. Brayton, Indianapolis, Ind.: To the question, "Should an epidemic with a death rate of two per cent. be dealt

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with as radically as an epidemic with a death rate of fifteen per cent."? I should say, No. An epidemic should be dealt with in any disease according to its nature and its severity, and the sense and judgment of the medical profession expressed as well as it may be in the Health Officers that may be elected. I say this because of the fact that this is a widely disseminated epidemic through the West, and the three years of its continuance has not given us, except in one or two instances, the severe form of the epidemic. It is well known to you that we are liable at any time to have an importation from New York or New Orleans, where they have had epidemics with twenty per cent. of deaths, in which the per cent. might be very considerably increased. We have had $30,000 of smallpox in Indianapolis. We have had five or six hundred cases, and we have had four deaths, one an infant of two or three days, one a woman of seventy-five, one woman of thirty-five at the City Hospital, complicated with miscarriage, and recently a death from secondary infection, which, so far as I know, is the only death in Marion County due directly to smallpox without complications. That is to say, we are dealing with a modified form of smallpox. The providence that looks after these United States and after some diseases has dealt very leniently with us, and I don't feel that we are called upon to use those extreme measures that the people of Muncie carried out so capably under their Health Officers, and which were reported several years ago in our State Health Board meetings. With the present epidemic I would say it should not be dealt with as radically as if the death rate was fifteen per cent. I say this after a very careful consideration of the case. I say it irrespective of the fact that over the State we have physicians who call it impetigo contagiosa. Very few of them, however, are calling it chickenpox now. I think the profession pretty generally have determined that smallpox occurs at all ages, but that chickenpox does not occur in adults.

I say no, we can not treat this epidemic as we would an epidemic that would produce fifteen or twenty per cent. of deaths. It would be costly and irrational. In New York the epidemic is more severe than in the West. They have no compulsory vaccination in New York; they advise it. If it were to become a custom here to wear a red string on one's arm, as they do in London, to show that one has been vaccinated, people would rush for the red

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strings. I think you should all try to make vaccination popular. Try to do this through the newspapers.

Dr. Bentz: I see Dr. Ferguson and Dr. Wagner here. I would like to have them speak on the next topic. I should also like to hear them speak on the third and the eighth topics. Could we not take up these two topics and discuss them while they are here? They may not be here at the next session. I should also like to hear Dr. Brayton speak on the same topics.

Dr. Brayton: I think it would be better to take the topics in their order. I think Dr. Ferguson, Dr. Wagner and myself have interest enough in the proceedings of this conference to attend the next session, and we will speak on them when they come up.

Dr. Dale, Marion, Ind.: I have just spoken to Dr. Hurty in regard to the term "radical." The point comes into my mind whether a set of guardians day and night confining people to the house and keeping other people out is best, or can we keep this disease as we do scarlet fever and measles and diphtheria, by placing a placard on the house and warning people that they will be fined if it is interfered with? I would like to bring that matter up. Is it possible to restrain people as we do in cases of scarlet fever and diphtheria? If we can, it will minimize our expenses very much indeed.

Dr. Carl Proegler, Ft. Wayne, Ind.: Dr. Brayton made a remark about being too strict. I think he took exception to something I said. If we are going to be lenient we are going to have smallpox to the end of our lives. If Germany had dealt with it as leniently as we do now they would have smallpox. As it is, they practically have no smallpox. Smallpox can only be prevented by the strictest quarantine and the strictest regulations possible.

Dr. Cumming, Indiana: I see no reason why we should not be as strict in one case as in the other. I am satisfied that by a strict quarantine and a general vaccination smallpox can be wiped out. If we expect to have it for all time to come, there isn't much use of doing anything. I am in favor of compulsory vaccination—I want that understood at the start. We had an epidemic of smallpox in Jackson County a few years ago, and have had a few cases

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since. I have seen this thing tested. In the families of those who have been vaccinated, the members who had been vaccinated never took the disease. I believe in vaccination, and revaccination if you are not satisfied with the first. The only way to wipe this epidemic out is by being as strict with the mild cases as with the more virulent ones.

Dr. Bentz: What is the sense of this meeting in answer to the question we have been discussing?

Dr. Probst: This question would be very materially changed by changing the first word. We might say, "Should the present epidemic," "Shall the present epidemic," and "Will the present epidemic," etc. I say it should be. We may resolve that it shall be, but I don't believe for an instant that it will be. We have to have the public with us in dealing with any such question. The public must supply the means for us to fight this disease, and so long as it prevails in its present mild form we will not have sufficient support from the public in fighting it that we must have if we are going to deal with it in a radical manner.

It has been my observation throughout this entire epidemic that this form of smallpox is not only very mild, but it is very feebly contagious. We have instances that could be multiplied very many, many times of exposures that ordinarily would have resulted in a large number of cases of smallpox, but which result in none at all in the present epidemic. Take the case of a man who comes into a crowded church or theater where several hundred people may be exposed. If it had been a malignant form of smallpox, we would try to quarantine the whole congregation. As it is, we do not think of such a thing, for in most instances no cases result from the exposure.

Dr. Charles Ferguson, Indianapolis, Ind.: Not being the Health Officer at present, I do not feel like speaking on the subject I think we often stultify ourselves as Health Officers by quarantining the people who have been vaccinated. Those who refuse to be vaccinated, I would vaccinate or keep shut up. The greatest difficulty we have is with the floating population. We have very little trouble with the residents, because we can keep track of them. Invariably the floating population that comes here

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to the city prove to be unvaccinated. The people who do not wish to be vaccinated ask us why we worry about them. They say if they don't want to be vaccinated to let them go. I think that argument does not hold much any more when it has become dangerous to ride on the street cars. I know of houses where I have put a quarantine on and vaccinated every person in the house except the person who had smallpox. We had to keep the people in and feed them. In my opinion, that is a practice that should not be tolerated. The people who have the smallpox should be taken to a hospital, and we should have a hospital where we should not be afraid or ashamed to take our own families. The great trouble we have had is in the fearful condition of the pesthouse to which we have to send these people. They are put in the care of people who are not trained nurses and physicians who are young and inexperienced, and there is a great fear on the part of the people about allowing their friends to be taken there. If we have a smallpox hospital that is kept as well as our best hospitals are, then the smallpox cases can be taken there and the rest of the family vaccinated and let go. Then we would have less expense.

Dr. Speicher, Muncie, Ind.: In Muncie and Delaware County we deal with smallpox something after the manner Dr. Ferguson said it should be dealt with. We allow the people who will get vaccinated the privilege of going about; those who refuse to be vaccinated we quarantine. Is the candle worth the flame? Is this expenditure of money worth the while, where we have such a death rate? Why not have people on their honor, the same as where you have cases of diphtheria? We don't feed these people. We put a sign on the house, and if the people do not stay in, we fine them. Why not do the same with smallpox? I think the people of Indiana want smallpox. I know some of the doctors that seem to want smallpox. I saw a doctor last week who had smallpox. He didn't believe he had it, because his wife and baby did not have it. They don't seem to realize that this thing is mild. I think our Legislature wants smallpox in this State. A bill was presented at the last session that would seem to indicate this. If they want smallpox, let them have it, and, if a few of them die, it is their own fault. In Muncie we are going on the supposition that we are going to have some more cases, and we have provided a hospital and take

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them there. We have objections, but we overcome them. They are all well pleased after they have been taken to the hospital, and they let this be known after they come out. The best people go there. We have tried to eradicate the name of pesthouse; we don't like it. We call it the isolation hospital. We keep the hospital well furnished and cared for. We don't do any quarantining in the houses. I keep my family vaccinated, and you can do the same; then let the people that want it have it, and we need not care.

Dr. Commons: Are we to have any definite conclusions on this topic, or are we to speak our little pieces and then let the question go?

Dr. Cole, Greencastle, Ind.: I think there should be unanimity among the Health Officers of this State in regard to this. If one county is very strict and another county is not, you may wipe it out of your own county and it will not be more than a week until some cases come in from the counties where they are not so strict. If we aim to use strict measures and have a rigid quarantine to stamp this thing out, I think we should all do it. But if part of us are going to be lax about it, the counties that are strict will suffer. I have had considerable trouble. Every little while we get it stamped out, and then cases will slip in from other counties. We have had a death within a month from this disease. The attending physician called it "black itch." We had trouble in keeping the case quarantined. While one County Health Officer will be strict, another one will be a little lax, and you can not keep it out of the State. I think if there is unanimity in regard to this, it would be better. I have been fairly strict, though I do not quarantine cases that have been exposed in the prodromal stage. In no instance has any one ever taken it. If there is unanimity among the Health Officers of the cities and counties of the State, I think we could stamp it out much better.

Dr. Commons, Union City, Ind.: In order to get a definite expression from this meeting, I wish to offer a resolution:

Resolved, That the present epidemic, with its mortality of two per cent., should be dealt with as radically as if the mortality was fifty or one hundred per cent.

Seconded.

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Dr. Stanton, (
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If it is true that we have all got to have smallpox except the immune and people who have been vaccinated, and this epidemic is going to be more virulent, if we can get them all to have the mild form before the virulent form comes upon us, why not let them all have the mild form? I feel like moving you that the Health Officers of the State of Indiana be declared this small per cent. and that all the other people be declared to be the large per cent., and the sooner they have it the better.

Dr. Bentz: The best thing a Health Officer can do is to get into politics a little, and get on the right side of the County Commissioners and the County Council. If he does that, there will be no trouble in getting an epidemic fund. I have had an epidemic fund of $250 lying in the treasury subject to my order for some time, out of which I have not drawn a dollar. The incidental fund furnished has been sufficient up to this time, and we have had the disease among us three times. But the people know what I will do. I have prosecuted and convicted three people in the county, and now every one knows that if they violate the law, they will be prosecuted; so they keep the rules. Get into politics and have your epidemic fund ready. I hope the motion will be carried.

Dr. Commons: The resolution now reads:

Resolved, That the present epidemic of smallpox be dealt with as radically as possible.

Now, as mover of the motion, I have a right to close the debate. I shall ask the chair to make a ruling that when I close Dr. Proegler will not say a word.

This matter must be treated as every other matter must be—with common sense. We are to manage this smallpox epidemic in the very best manner that we possibly can, all things considered. As it is, the statutes of this State now provide that no person is to go into or from the house where smallpox prevails, but the sense of this meeting is that we are to act up to the very best of our judgment in this case, everything considered—the expense, the probability of spreading the infection by vaccinated persons, and all that.

The resolution was adopted.

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"May we expect an
break in the future?"

Dr. Stanton, Ohio:
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Dr. Wagner, Indian
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sis of smallpox does not exist. If he says he has never made a mistake, I say he has never seen a case. I have made mistakes, several of them. Take a typical case of typhoid fever, with the rose-colored spots, the headache, the backache, and you can look for a serious case of smallpox. I was badly fooled in that sort of a case once, because I had a case of typhoid fever in the same family.

So far as the Cuban itch is concerned, gentlemen, that is not based on total ignorance. There is a disease in tropical and semi-tropical climates, caused by an insect that produces a disease almost identical with the first stages of smallpox. It is a form of the Cuban itch, so-called.

There is another thing I might mention here. The Health Boards and physicians must go hand in hand. We must be loyal to the Board of Health. There may be a mistake made sometimes, I know. I am frequently called upon to go and see cases where the knowledge of the Board of Health is questioned. I tell them I do not want to see the case; they must submit to the Health Board's knowledge. I am often appealed to on the question of vaccination. People want to know if the children should be vaccinated every three years. I tell them that is the rule of the Health Officers, and it must be followed; it is not a case for my opinion. I would not hesitate today to tell any one of my friends, if the Board of Health wants to have them taken to the pesthouse, to refuse to go, and, if the Health Officers try to drag them out there, to shoot them on the spot. I have yet to see a proper pesthouse, and I have seen a great many in this part of the country and in the South. I have not yet seen a pesthouse that was fit to keep a sick dog in. You would not want your daughter or wife locked up in a dirty hole with a lot of negroes. About six weeks ago I found, in a prominent block in this city, a young man with the smallpox. He belonged to a good family, was a young man of means, but what was to be done with him? He was there in that block where hundreds of people go in and out every day. I went to the Board of Health and the Secretary went to the man with me. I told him I wanted a good place to take him; that I did not want to put him in with seven or eight negroes; but he was put in there and kept there, and that was the condition of things. If you find me fighting you, you must not be astonished. A man who has any self-respect or any

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regard for the health and well-bein
to such rules. If you claim the r
houses, they have a right to ask of
treatment.

Now, so far as the large number
vaccinated is concerned, I feel very
Jameson, a doctor whom most of y
the friends of a certain man to go a
him from drinking, said, "Well, I
don't intend to tear my shirt to pr
the gutter. If he wants to roll, let

I agree with Dr. Brayton that,
cerned, each attack ought to be trea
the czar of a certain community, w
much injury, I think I would corra
them all together and inocculate the
or three weeks.

Another thing: You are going to
you have communication with Cub
between that island and our country
case will diminish.

Dr. Probst, Ohio: I have never
do not know whether we may expec
the virulence of this disease. Whe
I told people we might expect it to b
as yet it has not appeared to be an
know what to say about it now.

Dr. Taylor, Crawfordsville, Ind.:
all the epidemics we have encounter
they have been mild. Scarlet fever h
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prevalent that all the detention hospitals are like those spoken of by Dr. Wagner, of Indianapolis, I would invite you all to come to Crawfordsville and see our detention hospital. We have one that is a credit to any city.

Dr. Wagner: I shall be over to see it within a week.

Dr. Taylor: The people who have been sent there have been satisfied. No word of criticism has been uttered against it. It is just as easy for a municipality to have a hospital of that kind as to have one that is a reproach to the city.

TOPIC No. 4.

"What are the duties of State and municipality authorities in dealing with smallpox epidemics?"

Dr. Hurty: This, I think, relates to our legal duties, not to our opinions. We have covered this ground somewhat, and we have had opinions expressed on all sides, but we might profitably discuss what are our real legal duties in the matter. The statutory law, not the rules, says that Boards of Health shall take prompt action to prevent the spread of infectious and contagious diseases. We are appointed as officers of the State to enforce the law. I have asked the Attorney-General, under this statutory command, "Is it the duty of every Health Officer, county and municipal, to go forth and enforce that statute, or is it the duty of the Board?" His reply was: "The statute commands the Board." He said the question was a difficult one, but he believed the courts would rule that the Health Officer should go forth to enforce that statute, as he is the executive officer of his Board. It is certain that no court would ever decide that the statute was wrong because the Secretary of the local Board had enforced it. It seems we should put forth the utmost endeavor to do what is necessary and what is reasonable to prevent the spread of infectious and contagious diseases. That would involve another question, What is necessary and reasonable? That would depend upon the conditions we have in hand. Perhaps it remains for you to decide whether or not the mild cases shall be treated with the same severity as the very bad cases. Dr. Brayton says not. I suppose if he were a Health Officer, and it was optional with the Health Officer to decide, that he would pass

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the mild cases over and the severe cases he would quarantine. Is that a fair conclusion?

Dr. Brayton: That is unfair, and is not what I meant.

Dr. Wagner: I understood him to mean epidemics, not ordinary cases.

Dr. Hurty: Then I withdraw that statement.

The question leads me on to say that if we know a case of mild smallpox, no matter how mild, if we know it to be smallpox, and, knowing that a severe case can proceed therefrom, possibly followed by death, that mild case should be quarantined very carefully and very thoroughly if we can possibly do so. There are times when we can not do it; the people will not support us, and we are left alone. But we have put forth our utmost endeavor, and therefore we are acquit. I think we should enforce the law as thoroughly as we can, and should put forth every effort to keep smallpox and all other communicable diseases from spreading.

Dr. Goldman, Monroe County, Indiana: While I realize that the State is making an effort to stamp out this disease, yet I can look around among my patients and see people who have been quarantined unjustly—many of them unjustly. I had a case of a young man who was in very poor circumstances who had been exposed to the smallpox for three or four weeks and did not take the disease. He was working in another family, and they took the disease from the man he was first exposed to. After he was reexposed he was quarantined, and was compelled to stay in quarantine until six or eight of that family had the disease. Was it right to keep him there continually exposed until all the family had it? Has the State that right? It seems to me there is an injustice there. How are we in the smaller districts going to avoid this?

Dr. Taylor: That is a rather important question. We had cases similar to that in our epidemic. We had eighty-four cases, and, wherever a party like that would consent to go elsewhere and stay away from the family, we vaccinated him and let him go, after thoroughly disinfecting him. Where this could not be done, we compelled them to stay.

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promulgate those rules and see that they are executed. But I would add to this that it is also our duty to act with judgment and discretion. And it is the duty of the municipal authorities of State and county to pay the bills that we judiciously make.

Dr. Pitcher, Boone County, Indiana: This question of smallpox diagnosis is, in my mind, a query yet. We had Secretary Hurty at our place not long since, and he said we had smallpox at Lebanon. The case came in from another county. The local Secretary and myself saw the case. The man had some breaking out on his arms, but claimed that he often had similar eruptions before. We quarantined the premises where he was, and kept him there for twenty-five days. An uncle was with him, but this man had been vaccinated. He did not take smallpox, and no other cases followed. About twenty-one days after he was quarantined we received a letter from Crawfordsville, where he had been prior to coming to Lebanon, saying that several people who had been with this man while he was in that city had come down with smallpox. The question I wish answered now is, At what stage can the disease be transmitted? It seems to me that if this disease was smallpox we would have had other cases among the man's own family, or the man who stayed with him while he was quarantined.

Dr. Wright: I have been in the habit of using the room quarantine. I placed the room quarantine on two or three boarding houses, and I have placed it in families where a portion of them were compelled to work for their living. We quarantine the smallpox patient in a room and exclude the family. In no instance have we had an outbreak from it. I should like to know whether I have a right to do that.

Dr. Hurty: Dr. Ferguson has stated that persons who have been exposed and vaccinated are allowed to go at large. That is not the rule of the Health Board. The rule says that persons who have been exposed shall be quarantined for a period of fourteen days from the date of last exposure. When discussed in the Board, the question was asked, "Shall there be clauses or sentences in there qualifying that?" and "Shall officers be permitted by the controlling authorities to vaccinate the exposed persons, disinfect them and have them go at large?" It was the unanimous opinion of the

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Board that that would possibly be the proper thing to do; but the argument was made in accord with the decision of the National Conference of the State Boards of Health that the quarantine should be absolute. That is the rule at the present time. It is not being observed; we know that very well. Individually I say this: A person who has been exposed to smallpox should be vaccinated, disinfected, and allowed to go about his business, provided he will return to see whether or not the vaccination is effective, and provided he will report to the Health Officer within five days, and that observations can be taken as to whether or not the vaccination is becoming effective. If it is not, he should be vaccinated again, and then, after a period of ten or twelve days, the person should go into voluntary isolation or quarantine until the period is passed when there would be pretty good reason for believing that he is not going to have the disease. It seems to me that would be the reasonable way to treat such cases. Is it, however, the practicable way to treat them? Will it be done? The other is not done, hence I judge it is not practicable. In my mind it turns on that point, but I have expressed my individual opinion. I have followed that course in the State. I have told people if they would permit us to vaccinate them, and if they would promise to report to the Health Officers in five days, they could go about their work and they would be furnished a certificate that would permit them to continue at their work.

Dr. Carson: Would you allow the person to retain his residence at the place where the smallpox existed at that time?

Dr. Hurty: No, sir. One condition should be that he go elsewhere and live wherever he could. We proposed that in Greencastle, in some cases that came under Dr. Preston's notice, and Dr. Preston said there was no place for such persons to go, as no one would take them in, therefore they had better stay where they were. I would not have hesitated to take them in. This is all exterior to our work, of course.

Dr. ———, Monroe City: Is it right to force that man to go back to the infected house?

Dr. Hurty: No; he must take his own course.

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Dr. ———, Monroe City: Why should not the State take care of him?

Dr. Hurty: Does the State do that in other cases? He should provide for himself. He is not dangerous to the community, and the community can not lay its hand upon him. He must work out his own salvation.

Dr. Hunter: I want to ask Dr. Hurty a question. I understand that vaccination, where it does not protect, leaves the person liable to have varioloid. Smallpox can be contracted from varioloid.

Dr. Hurty: If the vaccination does not prove effective, the person should be again vaccinated. I said the regulations should provide for the return of the person in five days.

Dr. Hunter: I know a family where all except the mother escaped the disease. She had varioloid, and I had her quarantined.

Dr. Hurty: Varioloid is smallpox. One is mild, the other severe.

Dr. Ferguson: I don't believe in vaccinating a man and turning him loose, because I have seen men with smallpox with a good scab on the arm. They had been vaccinated too late. The vaccination was not quick enough. The vaccination had been done under the order of the Board of Health or the family physician. I would not indorse vaccinating a man and letting him go unless I believed he was a man of honor and could be depended upon to report. The floating population we have here in the city I would not treat in this manner. I would vaccinate them, certainly, but I would quarantine them until all danger was passed.

Dr. Hurty: Do you think the further provision that they should go into voluntary quarantine at the end of twelve days after the last exposure is necessary?

Dr. Ferguson: Yes, sir. When I spoke we were discussing the question of how to obtain a proper amount of money to take care of smallpox cases. I have seen seven or eight colored men, strong, able-bodied fellows, who had been exposed to the smallpox, and, although they had good vaccination scars, they were shut up with the other members of the family. Those men should have been turned out and compelled to go to work, while the members of the

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family who had the disease should have been taken to the pest-house.

Dr. Bentz: That brings up another question, and that is the length of the quarantine. Dr. Hurty says it should be for fourteen days. What is the experience of the doctors in regard to this? Is fourteen days long enough?

Dr. Pritchett, Vanderburgh County: We have smallpox in Vanderburgh since the first of October. I have had as high as sixty cases in the City Hospital at times. We had eight quarantines that were taken off on the fourteenth day, and on the nineteenth and twenty-first days we had twelve cases of smallpox, and had to put our quarantine back. I am surprised at some remarks that have been made about quarantining. We have been under the impression that it was the duty of the Health Officers to quarantine every one who had been exposed to smallpox. We have been doing this, and have put watchers over them in the city and in the country. We change watchers every twelve hours. Our experience, as far as vaccination is concerned, has been that vaccination after exposure to smallpox has done little good. About twenty per cent. of the people whom we vaccinated and on whom the vaccination has taken, broke out with smallpox in from fourteen to twenty-one days. As far as the time is concerned, our experience is that in the primary stage, even during the first twenty-four or forty-eight hours, more people have contracted it than at any other stage during the disease. That has been our experience. I don't think fourteen days is long enough to quarantine people who have been exposed to smallpox. In the southern part of the State we have come to that conclusion and we would like very much to have the time increased for our potection. The people know that fourteen days is as long as we can quarantine them, and at the end of that time we have to raise it.

Dr. Bosworth: I have had some personal experience in this particular matter. My father's family had smallpox. I was then nineteen years of age. We all had the smallpox except my father and mother. They had been vaccinated years before. I thought I had escaped. We had burned everything that had been used in the rooms where the patients were, and had disinfected the house

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completely, had scalded and washed and scrubbed, and thought there was no more danger. Twenty days from that date I took smallpox. I had confluent smallpox and was confined to my room for ninety days.

Dr. Bentz: I had some experience of that kind. We had a place quarantined, and yet some of the people took the disease nineteen days after exposure. I believe this conference of Health Officers ought to ask the State Health Board to extend the time for quarantining to twenty-one days. I quarantine them twenty-one days in Putnam County in spite of the State laws. This is an important question. We have the Ohio State Health Board Officers here, I should like to hear their opinion about the matter. This question may give us trouble some day. I would like to ask Dr. Stanton and Dr. Probst their opinion. They certainly have had plenty of experience.

Dr. Probst: Our limit in Ohio is seventeen days. The rules of the State Board of Health provide that any one exposed to smallpox after the eruption has appeared shall be quarantined seventeen days after the time of the last exposure. We have had cases reported to us where the incubation seems to have been longer than seventeen days. I think when we are dealing with the question of quarantine that we must remember the great many thousands of people who never contract the disease. I think seventeen days is not too long, but I should like to have some further expression as to whether it is necessary to quarantine a man who has simply been exposed to the smallpox during the fever stage. From everything I can learn cases that are contracted during any stage preceding that are exceedingly rare.

Dr. Cole: The last outbreak of smallpox we had in Greene County was seventeen or eighteen days after the last exposure. I am satisfied there were no exposures after that time. Now as to the infection being carried in clothing. I think there is something in that. Where the case has been exposed to the infection in clothing we do not always get the infection on the first contact with it. For instance, take clothing that has been in the room with a case of smallpox and it has not been thoroughly disinfected. A person may have been exposed to a case of smallpox in the in-

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cubation stage, and twenty-one days after that develop smallpox, when the disease may have been contracted from the clothing only fourteen or fifteen days before the disease developed. In all the cases I have seen—over two hundred—the rule was that the disease appeared before fourteen days, between the eleventh and thirteenth days nearly always. Most of them took sick on the twelfth day. It seldom reached the fourteenth day.

Dr. Taylor, Crawfordsville, Ind.: I have here a very important resolution that I would like to introduce and have referred to a committee before we adjourn.

Dr. Taylor then read the following resolution:

We, the representatives of the State Boards of Health of Ohio, Kentucky and Indiana, together with the representatives of the County and City Boards of Health of Indiana, in conference assembled in the city of Indianapolis, April 25, 1902, in view of certain documentary evidence before us, do resolve as follows:

We view with surprise and alarm the acts of the Governor of California and the Mayor of San Francisco, in attempting to suppress the facts relating to the presence of bubonic plague in that city. We are surprised at such attempts because we regard the facts as fully established and beyond all question. The Board of Health of the city of San Francisco, composed of honorable gentlemen, distinguished for their scientific attainments, and holding the entire confidence of their associates and the public, published the facts in their monthly reports to the city government, submitting therein all necessary data. The existence of the plague in said city was afterward confirmed, by an expert, sent there by the United States Marine Hospital Service, by an expert employed by the State Board of Health, and finally by a commission of eminent bacteriologists of international fame, whose sole interest in the matter was scientific. We view with alarm this attempt to suppress the fact of the presence of an epidemic disease, the most deadly known to medical science, because with bubonic plague and cholera in a number of ports in direct communication with that of San Francisco, and with the energies of the Governor of the State and the Mayor of the city directed to the suppression of fact rather than the plague, what guarantee has the interior that it will long be exempt?

We condemn the acts of the Governor of said State in attempting to discredit the competency and veracity of the experts above mentioned; for forcing the resignation of certain members of the State Board of Health because they concurred in their verdicts; for seeking to unduly influence the United States Treasury Department, and for making a condition of appointment to the vacancy caused by the above resignation.

We condemn the acts of the Mayor of San Francisco in co-operating with the Governor as above, and for removing from office the City Board of Health of San Francisco for no other reason than that in the faithful

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discharge of the duties imposed upon them by law, and their endeavor to protect the lives of and health of the citizens of that metropolis, they published the presence of the plague, and maintained their honor against all influence brought to bear.

We further declare that it is beyond our comprehension how any member of the honorable profession of medicine, conscious of the dignity of his high calling, and zealous for maintenance of that dignity, could accept appointment to vacancies thus created, under the conditions expressed or implied.

We call upon sanitary associations, boards of health, medical and scientific associations throughout the country to join with us in the above.

RESOLUTION.

We affirm that in every State, Territory and municipality of the United States where the representatives of the people have enacted laws for the protection of the lives and health of their citizens and have appointed boards whose duty it is to execute those laws, the citizens of said States, Territories and municipalities have a right to hold said boards to the faithful performance of their duties, and to the prompt and effectual use of every means which the law allows and sanitary science approves for the prevention of the introduction and spread of epidemic disease dangerous to the public health.

We further affirm that in the employment of such means it is absolutely necessary to notify the public of the presence of said epidemic disease, point out the locality in which it has appeared, indicate its progress, etc., in order that the public, being aware, may co-operate in its extinction.

We further affirm that, in pursuance of these measures and in answer to the rightful demand of citizens for protection, infected houses should be placarded conspicuously, and, if found necessary, guards employed and detention and isolation hospitals erected, in the employment of which measures, together with general disinfections, publicity should be courted rather than avoided.

We further affirm that, where the responsibility of protecting the public health rests solely upon said boards, no other authority, however high, should thrust itself between them and their duties, and where individuals or corporations interfere to prevent the discharge of said duties, such should be made amenable to the law.

Dr. Bence: You have heard the reading of the resolution. What is your pleasure regarding it?

Dr. Taylor: I wish to submit this document to your committee and also some reports of the Boards of Health of San Francisco.

Dr. Bence: Do you desire the committee to consist of three members?

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Dr. Taylor: It is desired that at least one member from eac State be on the committee.

Dr. Hurty: The gentlemen representing the State Boards o Ohio and Kentucky will meet with the State Board of Indian Perhaps they would like to take separate action on this.

Dr. Taylor: It has been suggested that the State Board be rep resented on the committee, and also City and County Healt Boards. I think seven members would be better than three.

Dr. Bence, the chairman, then appointed the following com mittee: Dr. Stanton, Ohio; Dr. Bailey, Kentucky; Dr. Cowing Muncie, Ind.; Dr. Buehler, Indianapolis, Ind.; Dr. Taylor, Craw fordsville, Ind.; Dr. McBeth, Fort Wayne; and Dr. Clarke Cool of the Indiana State Board of Health.

Dr. Stanton: I suggest that Dr. Bailey of Kentucky, be mad chairman of the committee.

Dr. Bence: When the committee meets it can arrange tha matter.

The conference was then adjourned to meet again at 1:30 p. m

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SECOND SESSION.

The second session was called to order by the chairman, Dr. Bence, at 1:30 p. m.

Dr. Pitchett, Evansville, Ind., presented the following resolution:

"Resolved, That we, the Health Officers of the State of Indiana, here assembled, ask the officers of the State Board of Health of Indiana to extend the time of quarantine of persons exposed to smallpox from fourteen days to twenty days."

Seconded.

Dr. Smith, Howard County: I would like to hear from Dr. Hurty about that. The State Health Officers have studied that question very thoroughly, and I would like to have Secretary Hurty's opinion on the matter.

Dr. Hurty: I am in favor of that motion.

The motion was then adopted without dissenting votes.

Dr. Hurty: I would like to have some one introduce a resolution expressing the opinions of the Health Officers on the question of vaccinating, disinfecting and permitting a person who has been exposed to smallpox to go without quarantining him.

Dr. Carl Proegler, Ft. Wayne, Ind.: In our county a card is put on the house where they have smallpox, and I have a strict guard kept for three weeks. At the end of that time if everything is not well in the house the guard is kept there. The county assumes the expense willingly if the family is not able to pay. At the same time if a man is perfectly able to pay the expenses, and we know that he is, he has to pay the expenses. We pay the physician. He has nothing to do with that, but he pays for the man and for the disinfecting of the premises. We do not let any one suffer on account of the quarantine. We take care of them as long as they are sick; and afterwards, if we find the people are able to assume the expenses we make them do it. The county pays the physician's bills.

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and the other he thinks is not reliable. If he lets one go free and confines the other, would not the one he confined have a proper action against him for damages for depriving him of his liberty?

Dr. Bence: I am not a court. The courts would have to decide that.

Dr. Sholtz: Almost any one can get people to testify to their good character.

Dr. Bence: I think the people in the neighborhood of a quarantined house will see that the quarantine is obeyed. I find that my telephone bell rings at once whenever any one violates the quarantine I put on. I find the neighbors are pretty good guards in these cases. In rural communities and small towns we have no trouble. The only trouble would be in the cities.

Dr. Proegler: If any one is exposed to smallpox, it makes no difference. Whether he has smallpox or not, the very moment I have a case in my city or county I don't allow that person to go out without a card, "exposed to smallpox."

Dr. Wright moved that the motion be laid on the table.

The motion was seconded by Dr. Smith, Howard County.

The motion to table was lost; 14 votes for the motion to table and 15 votes against.

Dr. Bosworth: I would have them report in five days. A person can have smallpox and be well in twelve days.

Dr. Spicherman: We make them report in five days. Will this motion interfere if we insist on their appearing in five days or sooner?

Dr. Bence: That five days ought to be necessary to look after the vaccination.

Dr. Ferguson: Suppose there has been a common infection. Suppose I find that there is a case in a family and several persons have been exposed to it, and some of them may be slower in developing cases than others. If you let one person go for twelve days you may have him spreading smallpox all over the country.

Dr. Commons: There is nothing in this resolution to prevent Health Officers requiring a man to report every day if they wish it. It says that he shall make his report within twelve days.

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Dr. Hunter: When it
resolved on this thing, th
tempt to impose any differ
trouble about following th

Dr. Fitch, Boone Cour
that this clause be five da

Dr. Commons: I accep
resolution was lost, there

Dr. Fitch: I hope that
this resolution will give us

Dr. ———: We don't
to get the people to follow t
enough as it is.

Dr. Ross: I suggest w
have been playing at that
nothing. If we had pass
anything to the people ex
something in contradictio
has done. If we do anythi
adjourn.

"How shall Health Offic
aid of business men in the

Dr. Bence: There isn't
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Dr. Anderson, Swayzee,
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said there was nothing in the statutes that would compel them to pay it. I want to know what to do.

Dr. Loomis, Vermillion County: I have had the same thing to contend with several times. It have written to Dr. Hurty two or three times to have that point settled. I think I have it settled to my satisfaction who is to pay for the doctor and who is to pay for the quarantine. The Attorney-General has made this rule that the County Health Officers outside of incorporated towns shall quarantine and the Board of County Commissioners have that bill to pay. If you are in an incorporated town or city they will have to pay for their own sick. If they want any assistance from the County Health Officers they call them in. The town or city, however, has that bill to pay, because they do their own quarantining. In case it is necessary to have a physician for a poor person it is the business of the Trustees to provide for the poor of their township. If people can not pay their own bills, the Trustee hires a doctor and pays the bill.

Dr. Shepard, Jay County: I think this is simply a business proposition and any city or county selecting county secretaries should first get it into their heads to select a man qualified in every particular. Let the man be a business man as well as a physician. Let him go to the people and say, "Which would you rather do now, spend so much money or have smallpox?" If you present it to them in a business-like way you will get what you demand every time.

Dr. Anderson: They would not do it in my town. I presented the matter to them in that way and they would not pay the bills.

Dr. Commons: The way in which the Health Officers should strive to acquire the confidence of the business men and the authorities is to do their duty in the premises strictly in accordance with the statutes of the State and the rules established by the State Board of Health and ask no questions. They should go ahead strictly with the business according to the rules and let the results take care of themselves. Smallpox is a disease, an epidemic of which may be considered a special thing. We have no trouble in our county that I know of. In quarantining such cases as we have had we nailed a flag on each house where they had the dis-

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ease, placed a special police officer on guard, and said to our Council that they would have nothing to do with it but pay the bills, and they have done that without any questioning.

Dr. Anderson: Sometimes you get Councils that will not listen to anything of that sort. Our Council said they would not pay a cent unless we could show them the law compelling them to do it.

Dr. Powell, Marion, Ind.: The gentlemen are not speaking on the question under discussion, but Dr. Anderson has a question that to him is important. I don't know whether it has been discussed here or not. I have submitted the matter to the Attorney-General for an opinion and I have no doubt what his opinion will be. The question under discussion is not the liability of the Town Board, but the question of dealing with the business men and the general public. As far as my experience goes when a matter like that is placed before a business man when you go to him and say, "Here, Mr. Brown, we have a case of smallpox in town," he will say to the Health Officer, "Go ahead and do whatever is right and proper to quarantine the case and prevent any spread of the disease. We don't want our town injured by the reckless exposure of the public." I have never found a sensible business man to answer that question in any other way. If you let smallpox spread it will hurt your towns and hurt the business interests, and the business men of the town do not want that.

TOPIC No. 6.

"How may those physicians be managed who diagnose typical smallpox as chickenpox, and stick to it, although every symptom of smallpox is present?"

Dr. Bence: There is one way those fellows could have been got at, but that would have necessitated beginning with their grandfathers.

Dr. Proegler: It is supposed that every Health Officer is very well versed in diagnosis. In Fort Wayne the physicians know that I know my business, and when I say a case is smallpox and stick to it, they let it go at that. A very few weeks ago I had a man of great fame come to me and ask me how I diagnosed a case.

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He said he diagnosed it as chickenpox. I did not, and a card went up, and he never said a word. We had Cuban itch, we had impetigo contagiosa, we had almost anything else but smallpox. Where do you find any impetigo contagiosa? Only in small children.

Dr. Fitch: There is a simple method of avoiding trouble. I simply take a smallpox card, when I have trouble in diagnosing the case and turn the name down. I quarantine the house without naming the disease.

Dr. Spickerman: We do that. We have signs which read: "Contagion within. Five dollars fine for tearing this card down." We have a right to do that.

Dr. Wright, Starke County: The question is how shall we educate physicians? How shall we get them so they will not do these things? That is the question.

Dr. Ferguson, Indianapolis: The doctor has brought up the point I wish to speak about. The question is very easily settled. If we require, under the law, that every case of chickenpox be reported to the Health Officers, then let the Health Officer with a proper man, a man who is an expert, investigate and see whether or not it is chickenpox. If it is smallpox the case is taken out of the hands of the man who said it was chickenpox. We can put up a card that does not name any disease. We can card the house "Contagious disease," and the doctor who says it is chickenpox will agree to that. If we know and feel it is smallpox, don't be afraid to put up a smallpox flag. Let the physician bear the odium of the mistake, the physician who diagnosed the disease.

Dr. Cole: I think we have instructions from the State Board of Health to notify all physicians to report all skin diseases. The question is, what shall we do with the physician who reports smallpox as chickenpox? I have had some trouble in that line. In one case the man had to pay a fine. He was very obstinate and caused considerable trouble and was responsible for some cases breaking quarantine. He called it "black itch"—a new disease to me. He pleaded guilty for not reporting the case, however, and had to pay a fine. In another town I had one physician who resisted the diagnosis, and said I was wrong to quarantine it,

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disorder that might occur under his observation, and also requiring householders to report any acute eruptive disorders. That gave us the opportunity to make the investigation we wished to make. Some of the physicians that made the diagnoses were honestly mistaken. They had a picture of smallpox in their minds that was entirely different from anything we have encountered in this epidemic. I came at in this way: I asked them if they believed smallpox was prevailing at that time in the United States and over a great part of Europe and Canada. They said they did. Then I asked them if it was prevailing so extensively over the United States, why not admit that it was prevailing in Crawfordsville? There are thousands of ways by which the contagion can come into a community. I found this a forcible argument. It started them to thinking and finally they became convinced that there was a possibility of its prevailing there. After that it was not hard to get them to believe it was there. Some, for the sake of notoriety, will insist to the last that it was not smallpox. The measure we adopted was a good one. The adoption of a measure by a Board of Health is not so good as an ordinance of that kind. Have the City Council adopt the Board of Health rules as ordinances; then if any man violates the ordinances he can be prosecuted for it, and one prosecution will about settle the whole thing.

Dr. Proegler: We have experts in surgery, in ophthalmology, and in other diseases. A man to be an expert in diagnosing smallpox must have seen smallpox, and when he has seen the variety of cases I have, I think he may justly call himself an expert in diagnosing smallpox.

THE DIAGNOSIS OF SMALLPOX.*

By Dr. Carl Proegler, Fort Wayne, Ind.

To form a correct diagnosis of smallpox, it is necessary to have had experience in diagnosing quite a large number of cases, and in mild cases, like those now prevailing in the United States in endemic and epidemic form, it takes an expert to come to a correct decision. I have seen in my lifetime many thousand cases of variola; I saw them in an epidemic in Hong Kong, China, also in Buenos Ayres, South America. After the surrender of Metz by the French in 1870 we found nearly 15,000 cases, half of which were of the hemorrhagic variety. The Chicago epidemic of

*Read before the Allen County Medical Society, Fort Wayne, Ind., February 20, 1900.

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1871-72 was also seen by me, not to speak of smaller epidemics in Illinc and Indiana.

The first appearances of variola are knot-like projections in the ski which a careless observer might take for measles. The projections are d veloped in the middle layer of the epidermis by a fluid which invades tl whole network of epithelial cells and presses them outwards. Accordii to Kluge the fluid contents of these granules at first contain no pus cell but after a time all the alveolar spaces are filled with pus. It is chara teristic for a variola pustle to have at its base an umbilicated tapering (dent. The contents of these pustles are always purulent, or to make more clear, they contain nothing else but pus. These pustles are alway umbilicated and always surrounded by two distinct inflammatory areola This is so characteristic that a diagnosis may be made from these sign alone.

We distinguish variola discretae, coherentes and confluentes, accordin to the varieties. We also have variolae hemorrhagicae sen cruentae (blac pox) which is caused by blood extravasation in the pustules. In sever epidemics, as for instance at Metz, where nourishment was almost nil scorbut and dyscrasia of the blood produced pyaemic conditions, and per sons so afflicted literally rotted away.

Smallpox is found in the mucous membrane of the mouth and throat also on the outer edges of the tongue and between the lower lips, very often interfering with deglutition and mastication. We also find smallpox on the ciliary edge of the eyelids, and severe conjunctivitis is also always present.

The period of incubation is between 10 and 14 days, sometimes between 5 and 20. No outward symptoms in the very early stages are noticed, though with a prevailing epidemic around us we may surmise variola.

The stadium prodromorum is generally ushered in by a chill, followed by quickly rising temperature, sometimes from 102 to 104, the fever lasting from 2 to 5 days. Headache and backache are in this stage nearly always present. Delirium, vertigo, general malaises, anorexia, a thickly coated tongue, nausea and vomiting are generally present. Another constant sign in this stage is an enlargement of the spleen. The eyes are swollen and painful and light is intolerable.

After the end of these initial symptoms we invariably find red nodules on the velum palatae, and also on the mucous membrane of the mouth. As careless observers have sometimes diagnosed typhoid fever in this stage it is well to remember that a careful examination of the mouth will settle the diagnosis.

The eruptive stage usually begins after three days, and the eruption begins on the face. A firm shot-like sensation is conveyed to the finger by the papules. The exanthema progresses from the scalp to the soles of the feet. There is also a tendency of the eruption to appear more pronounced on exposed surfaces. The inflammatory areolae around the pustules, however slight, is characteristic of smallpox only. The exanthema of no other disease presents this double areola.

The appearance of the pustules within the mouth, on the eye, on the palms of the hands and the soles of the feet are certainly valuable corroborative symptoms.

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As soon as the eruption is about 2 or 3 days old a perceptible, never to be forgotten odor develops from the patient, and is seldom absent. This smell is one of the most valuable signs for diagnosis, and I am perfectly astounded that it is hardly mentioned in any of our text-books. But at the same time I want to emphasize that this smell is sometimes not present in mild forms of the disease and occasionally is absent in well marked cases. When present it is a valuable diagnostic symptom. (In the case of Mrs. Axt, who has recently been released from quarantine here in Fort Wayne, I diagnosed smallpox from the odor before I entered the house.)

The last stage is the stage of excication and decrustation. The pus contained in the pustules dries up to brown crusts, which afterwards fall off from their base, leaving scars, the well-known pock marks.

Bacteriological examinations have so far revealed nothing regarding the nature of the contagion of smallpox.

To the keen observer smallpox can never be confounded with anything else, and it is certainly humiliating for the medical profession that so many diagnostic errors have been made. The common error among physicians all over the United States where smallpox has appeared is to substitute chickenpox for variola, though there is not the slightest affinity between them. Varicella is a disease sui generis. In a large experience with smallpox I have never seen a single case of chickenpox in an adult, and it is certainly as rare in adults as a white elephant in Siam. Before you make your diagnosis, find what disease is going around.

We find varicella epidemic and sporadic, and children will get chickenpox even when vaccinated, which fact ought to be well remembered. The period of incubation is about fourteen days. In some of the cases we notice fever of a mild type, in other cases hardly any. The exanthema consists of sparsely appearing vesicles, which are seen first on the scalp, especially on the outer edges of the hair and the hairy part of the scalp. The eruption spreads in a few hours all over the body, contrary to the eruption of smallpox which takes from 2 to 3 days. The vesicles rest on very light hyperaemic bases, are never umbilicated, have no inflammatory areolae and the contents of the vesicle contain nothing else than a water-like serum, extremely seldom pus. After twelve hours the vesicles burst, collapse, and dry up to a kind of crust. The marks left behind are always even and disappear entirely in a few days without leaving any trace behind. Chickenpox is a very benign disease and rarely calls for medical treatment. It sometimes attacks children more than once.

Impetigo contagiosa has also been classed among the diseases which might be confounded with smallpox. Two renowned skin specialists of St. Louis made this error, though they were afterwards convinced by other physicians that the disease in question was nothing else than smallpox. It passes my comprehension that such a thing is possible. We older physicians designated the disease impetigo scrophulosom, thus indicating by its appellation that it only appears in the underfed and poor, whereas smallpox attacks rich and poor, clean and unclean, sick and well. Impetigo is always due to inoculation of contagious pus, independently from the source. Scratching leads to purulent lesions in children, hence pediculi capitis are a very common cause of impetigo. Crooker mentions the

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twenty pustules on it, yet the very first of the prodromal symptoms was convulsions.

Dr. Probst, Ohio: There is an old saying, "All signs fail in wet weather." The doctor gave us a very excellent description of smallpox as we ordinarily see it and as we read it in the text-books, and I think any smallpox nurse would recognize it readily. That is not the kind we have been having in our State. We have been having smallpox where the children have not been sick at all. Go into a family and talk to the mother about the case and she will say the first thing she noticed was an eruption on the child. If it was sick before it was not sick enough to attract the mother's attention. The physician has not been called in until the eruption appeared. The diagnosis has also been largely based upon watching the case from the beginning to the end. The attending physician usually has that opportunity and the Health Officer does not. He may be called in and finds the case at a certain point and he wants to know at that time what it is. I have made some mistakes in diagnosis and I probably made a great many more than I know. If I felt a doubt in the case I said it was smallpox and swore to it and stuck to it, and never admitted I was wrong. In this way I have probably saved myself from being criticised. I think the mistake we make is in trying to teach the diagnosis to the physician by continually holding up typical cases. Those are not the cases we want to teach them anything about. I would not agree in the statement that we always have umbilication in the eruption of smallpox. You may find it in some, but I am satisfied I have seen many cases where the majority of the pustules were not umbilicated. We occasionally have smallpox where there is no eruption at all and it is difficult to diagnose that kind of a case. I have a great deal of charity for the physician who fails to make a diagnosis of smallpox in some cases.

Dr. ———: Can a patient have smallpox and not have eruptions?

Dr. Probst: Yes sir.

Dr. Boswell: We have smallpox without any eruption. I can give you two instances. I could give others, but these are typical cases. I saw a family where there was smallpox. One case was

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a diagnosis for me. I was called to see a negro in a block in a thickly settled part of the town who had made his own diagnosis of his own case, and asked to have me see him. I went to see the case and there was the man completely covered from the hair of his head to the soles of his feet, including the palms of his hands and the soles of his feet, with immensely extended vesicles which on being punctured did not entirely collapse, and which were filled with pus. He said, "This thing came out on me all at once. I had no fever and no chill, except when this eruption came out." He said he saw it on his chest and back first. He said it came on his face in a few days. The case was so interesting I took several physicians to see it, among them Dr. Brayton and his son. Dr. Brayton's son had seen hundreds of cases in the smallpox hospitals in New York. The patient was perfectly honest and gave all the symptoms. He went to the pesthouse willingly. A photograph of the case or a description of it would lead any of you to say this was a case of smallpox. In fourteen days after he was sent to the pesthouse he was taken down with intense symptoms, the prodromal symptoms of smallpox, and went through the typical eruption, almost confluent, had pustules, and now bears pits from both of them. The first pits are the pits of chickenpox, the peculiar sharp pits we have in that disease. It was a typical case of chickenpox in an adult, or he had two cases of smallpox inside of thirty days.

As to umbilications. There are forty-one cases in the pesthouse now and I venture to say that a careful examination will not show ten per cent. of them umbilicated and on those ten per cent you will only find a few. A patient died there last week with smallpox where there was no umbilication. In chickenpox in persons of nearly adult age we find something that looks like umbilications. A necrosis forms there and we have to look at it through a microscope to determine whether it is umbilicated or not. If you find the eruption on the fingers, in the palms of the hands and the soles of the feet, it is smallpox, yet chickenpox eruptions come there too. The eruptions in the mouth the doctor speaks of always come in the mouth in chickenpox; I never saw it to fail and I can not tell on that thin mucous membrane the difference in the eruptions of chickenpox or smallpox. Dr. Corlett in his recent book on con-

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tagious diseases says that he has never seen a case of chicken in an adult, and he limits the definition of adult to a man woman above the age of puberty. He is a recognized authority the question and he has seen thousands of cases of smallpox. I remember four cases distinctly, one not long since, a young mar his twenty-fifth year. He was taken down with chickenpox. sent him to an isolation hospital, not a pesthouse, and he recove promptly and was at his business in a few days. He had b successfully vaccinated. In the case of the negro I was labor under the impression that an adult could not have chickenpox. must be careful not to send to the pesthouse patients who do have smallpox, because it is dangerous as far as the law is c cerned, for I think a man should be indemnified for it, especia if we send him to such a place as we have here; but it is nc pleasant thought for a man to carry to bed with him that he sent a chickenpox patient to the smallpox pesthouse. Not l since a negro was sent to my office by a doctor in the town. walked into the office and wanted to know what was the matter w him. He had a pustular eruption. I told him he had smallp He said no, that he had syphilis. He had the primary lesion. careful study of the case revealed the prodromal symptoms, s he was sent to the pesthouse. There he recovered from the sm pox, but still had syphilis. One case came to the City Hosp in 1894. I saw the man coming into the door and called to l to stop. He said he had syphilis. That man was dead in less tl three weeks from septic infection. It was one of the worst ca I ever saw. It is the only case of pure pustular syphilis I h ever seen.

Either I have been making great mistakes, as well as Dr. Br ton and the rest of them, if we have no impetigo contagiosa in t country. Come to Indianapolis, Doctor, you are too clean in F Wayne. Many times I have been sent to see what was the mat with a child that had impetigo contagiosa, or that had an unkn disease. It is something which confounds the laity, and it i disease which will confound the physician who is on the look for smallpox.

Dr. Probst: Does this occur in adults?

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Dr. Ferguson: No, only in children. Not long since Dr. Bieler, the City Health Officer, asked me to see a case with him. He was puzzled about it, and when he is puzzled the rest of us may well be puzzled. In this case there was an eruption on the soles of the feet and over the entire foot, and on the hands and in the palms. This was a typical case of vascular smallpox: The absence of the eruptions anywhere else led us to believe it might be something else. There were the typical prodromal lesions; in fact he was treated for the grip, as many cases have been which afterward proved to be smallpox. The physician who makes a mistake in the diagnosis of smallpox may be excused if he makes a mistake. However, the physician should be taught to notify the Health Officer if he is in doubt. The county will have to pay for an expert to decide the case. There is no reason why a physician should be worried about these cases.

Dr. Proegler: I am very thankful to the gentlemen who have listened to my speech, and will say that I do not know all about smallpox; but will say at the same time that if a man has seen thousands of cases of that disease, and has seen them all over the world, I do think he comes near deserving to be called an expert. At the same time I will say there is a good deal in intuition.

Dr. Taylor: I regard it as a somewhat dangerous thing to admit the possibility of a case exhibiting the symptoms Dr. Ferguson described as chickenpox. I would rather regard that as a case of irregular development. The patient may get over all the symptoms and may feel well enough to go on the street. I think the man had the smallpox first, and when the secondary symptoms set in he had it for good.

Dr. Ferguson: Do you refer to the negro?

Dr. Taylor: Yes.

Dr. Ferguson: They all dried up. I am willing to admit that he had two cases, and then I can say I was never mistaken.

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TOPIC No. 8.

"How may the mildness of the present smallpox be explained?"

Dr. Bentz: Dr. Earp, how do you account for it?

Dr. Earp: I am not a Health Officer at this time. I will say, however, as far as this one point is concerned, I find it a hard question to answer. I would like to have some one enlighten me as to why this is a mild epidemic.

Dr. Bentz: Dr. Probst, I wish you would answer the question.

Dr. Probst: There have been many theories advanced; none that I have accepted. I can only call attention to some of the theories. Dr. Hyde, of Chicago, it seems to me, got on the wrong tack when he said it was due to the fact that it was imported from Cuba by our soldiers, and that they brought in a very mild form of the epidemic, and that it propagated its kind. Another theory is that it is due to the hereditary effect of vaccination. It is said that children of parents who have been vaccinated, even though the children have not been vaccinated, have the disease milder on that account. I don't think we can accept that at all. Another theory is that the good sanitary conditions that have prevailed in late years accounts for it. So recently as 1893 Chicago had an epidemic of smallpox where about 33 per cent. of the cases were fatal. It seems to me we have not been able to change the sanitary conditions of the cities so rapidly that it would cause the disease to be of a milder nature. For myself, I can only plead ignorance of why the disease is of so mild a character.

Dr. Stanton: I have heard a number of persons express the belief that the practice of vaccination for so many years had led to a modification of the disease, because the protective influences of vaccination had been transmitted. The epidemic in Cincinnati in 1893 was as malignant as any we have ever had. We have had in the last few years as severe epidemics as have prevailed at any time within the last one hundred years. I don't believe vaccination has anything whatever to do with the mildness of the disease. I don't think we can account for it; but I do not think it is going to continue in its present mild form always.

Dr. Bentz: Dr. Ferguson, what is your theory?

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Dr. Ferguson: Same as the others; I agree with them.

Dr. Bentz: It is something beyond the knowledge of man, I suppose.

Dr. Ferguson: Why is the epidemic so bad in New York at the present time? Why are there so many deaths there?

Dr. Brayton, Jr.: I had an opportunity last spring to observe cases in New York, and these cases originated mainly from cases that were brought over from Italy in the immigrant ships, most of the immigrants coming from the vicinity of Naples, and Naples at that time was pest-ridden by a very severe epidemic of smallpox. The first cases which occurred in New York City were cases that occurred among the Italians. The outbreak occurred at least one year and a half after smallpox of a different, or rather milder, form had been prevalent in the Western States. It has been said by Dr. Hyde, of Chicago, that the smallpox we have in the Western States is milder, possibly, because it has run its course in Cuba and Mexico, where it is much milder than it has been in Europe and in the Eastern States, which is nothing more nor less than the European type. It is very interesting to know that in New York City there is a higher rate of mortality than there was last year, a mortality of about thirteen per cent. I noticed in the New York Medical Times today that there were seventy-five cases reported last week, and twenty deaths. This shows a very peculiar condition of things, one which is to my mind almost inexplicable. We can speculate on these things, but exact theories we can not give.

REPORT OF COMMITTEE ON RESOLUTIONS.

Dr. Stanton: The committee to which was referred the resolutions offered by Dr. Taylor present the resolution as offered by Dr. Taylor without amendment.

I move that the resolution be adopted.

The motion was seconded and carried by a unanimous vote of the conference.

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"What are the complica
pox?"

Dr. Bentz: What has b
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Dr. Hurty: I have onl
a gentleman from the Ea
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liver." I asked him his re
and he told me that some c
and Philadelphia by some
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give any evidence.

Now I have been watchi
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would follow, especially in
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Dr. Ferguson: I would
number of cases, how many

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or abscesses. That has been one great trouble here. Whether we have the germs gathered together in the pesthouse that attack these people or not, I do not know, but the discharge of these patients is greatly retarded by the presence of abscesses on different parts of the body. The abscesses are very severe, and we have to keep the patients in the hospital until these are healed. Probably four or five per cent. of the cases of smallpox that have been there have suffered from boils and abscesses.

Dr. Hoadley: So far as my experience goes, I have found that the patients, when well, were as well as we would expect them to be after any other disease. We have observed no sequelae so far, and the cases extend back three years.

Dr. Taylor: We have had in Crawfordsville 84 cases. In one of these abscesses appeared and in several cases boils appeared. I shall speak of one interesting case. In a neighboring county there was an incipient epidemic of smallpox. The Health Officers met with vigorous opposition on the part of a certain physician. He went around proclaiming that they were not cases of smallpox, because he had vaccinated the people and the vaccination had taken. I saw some cases which apparently had taken and many that did not. In two instances that I remember very few of the vaccinations were effective; in the others they were. What is the experience of others here who have had experience as to whether they regard that as confirmatory of the fact that they were not genuine cases of smallpox.

Dr. Stanton: In a smallpox hospital all the patients were vaccinated and it was found that on many persons the vaccination took. In fact as many cases took as where revaccination was tried in a short time after a successful vaccination. That is not proof that this disease is not smallpox.

I would like to call attention to one peculiarity of this epidemic and that is the extreme mildness of the disease in the case of children. We read in our text-books that smallpox is especially fatal in the extremes of life. In this epidemic, so far as I have seen it in the last three or four years, and I have seen several hundred cases, the disease has almost uniformly been of an extremely mild type in childhood. Not in infancy, for many infants have died, but in early childhood it has been extremely mild.

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Dr. Cowing: That has been our experience in Delaware County. The cases of little children are very mild. I have seen in the last week fifty children who have had smallpox and very few of them have been sick at all; while the adults in the families who have not been vaccinated had pretty severe cases of smallpox. In one locality the mistake was made by five physicians in the diagnosis of the disease as chickenpox, because it began among the children and only became severe as the older members of the family took it. A close examination of the children, however, showed the typical pustules as they were drying up and going away. Closer examination showed that the life of the pustules was too long for chickenpox, because they lasted, in some instances, ten or twelve days.

The greatest need today, I think, is a keen, intelligent ability on the part of the physicians to quickly diagnose the disease. Dr. Spockerman and myself have come to this conclusion from the experience we have had during this epidemic. Until we get that on the part of the physicians we will not be able to control the disease promptly. We must have the co-operation of the physicians and they must be informed as to the diagnosis. It matters not what the public think, if we have the support of the physicians we will usually be able to control this disease. I think we must have an appropriation from the next Legislature, and this thing should be presented in a plain, practical way throughout the State, not only to the physicians but to the laity. I am sure a properly prepared pamphlet would be helpful if it was distributed among the people.

TOPIC No. 10.

"How many physicians could be induced to take proper precautions against carrying smallpox?

Dr. Bence: I think that it ought to be broadened a little as I have just written here:

Resolved, That the State Board of Health be requested to order every physician in the State to provide himself with a modern antiseptic suit to be used and worn when visiting contagious diseases, and notify County Health Officers to report all who do so.

I think physicians are too careless. If there is another antiseptic suit in the county besides my own I do not know where it is. The physicians there are probably on an average with the rest of the

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physicians of the State. I do not think there is any law that would compel physicians to wear these suits; but if we had a special circular to be sent out to County Health Officers, they to distribute them to the physicians, it might help matters. The circular could state that the physicians were to report to the Health Officer that they had purchased such a suit, and if they failed to report he should send this information to the State Board of Health. In this way we might get something done.

Dr. ———: What about the undertakers?

Dr. Bence: Speaking from personal knowledge of our undertakers I should say they are extremely careful. There is not an undertaker in our county that buries a contagious case who does not come to the office and get sprayed with formaldehyde. They always wear rubber coats. I do the disinfecting for them and have for several years. Our undertakers are extremely careful. They have families and do not want to take contagion to their own homes. They are as much afraid of the disease as others are.

I just read the resolution as a suggestion. I do not intend to offer it without the advice of Dr. Hurty and the other secretaries here. I want to know if that would be the best way to get at the matter. We should find out how many of the physicians will obey an order of that kind. Everyone will not; you can not make them all do it, but if you get half of them to do it you will have made a great improvement.

Dr. Hurty: Such rules have been adopted but never promulgated. Why? When the health law was passed in 1899 an editor of a paper who was a member of the Legislature sent up an amendment providing that the promulgation should be by publication in two newspapers of different denominations in the county. That was a newspaper graft. The method adopted by the Legislature was a very objectionable one and when we sent out the rules to the different counties to be promulgated, after the first day or two I was afraid to open my mail on account of the storm the method of promulgation aroused. An editor brought that about. It brought upon the State Board of Health abuses of the most serious character. We opposed the method. The county attorneys and County Councils and County Commissioners all were united in saying that

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the State Board of Health was an old nuisance in imposing expenses, etc. They supposed we had that law put through. We don't care to go into that again, it is dangerous. I think we can get that clause of the law repealed at the next Legislature. We have this suggestion to make. It has already been made by one of the most thoroughly known judges in Indiana. The suggestion that a law be passed controlling this matter of infectious and contagious diseases. This very judge had before him once a physician who had refused or neglected to put on an antiseptic suit when he was visiting a scarlet fever patient, and he fined that man; but he said to me, "I don't know whether there is a law for that positively or not, but you should have such a law passed." I asked him if he would revise such a law and give it the true legal flavor and character. He said he would and suggested putting a clause in it providing that any physician who transmitted disease or carried it in his clothing, if shown, would be liable in any sum not less than five thousand dollars. He said, "Put that in and then let the Board of Health promulgate a rule for the protection of health and it will receive attention everywhere."

I think such a law can be easily passed through the next Legislature, especially if our six hundred Health Officers in this State will buckle down and see that it is brought up. It is like that laboratory. If you will all work for that laboratory we can have it. If we do not get it it is because we have not worked for it. The quarantine law should also go through.

Dr. Taylor: I wish to offer a motion with reference to the resolution that was passed here today. Our object is to get this before the various Sanitary Boards of the United States and to bring about co-operation in the matter.

I move that the Secretary of the State Board of Health be asked to notify the Annual Conference of the State and Provincial Boards of North America, and the American Public Health Association of our action here today.

Seconded.

Dr. Bence: It would be well to send it to the medical journals.

Dr. Hurty: We will do that and spread it as broadcast as possible. We may get it published in daily newspapers as a piece of news.

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Dr. Taylor: We depend upon these ports to keep such diseases out of the interior of this country. The disease is liable to affect every great city that has a submerged population that live in tenements and on scanty rations.

The motion was carried by a unanimous vote.

Dr. Hurty: I have been asked by two officers when their terms expire. The terms of every Health Officer will expire on the 31st day of December, this year. All Boards will have to re-elect their officers in their first meeting in December for four years from the first of January, 1903. Every town, city and county Health Officer serves four years.

Dr. Ferguson: How about our officers here? We have a charter.

Dr. Hurty: Indianapolis is, I think, relieved of that. It may be, however, if you bring it before the courts you will find that the City Health Officers here, have a tenure of four years despite the administration, because the law was passed after the charter was given.

I would like to read here a letter we have just been handed by the Secretary of the State Board of Health of Kentucky:

Dr. J. N. Hurty, Secretary State Board of Health of Indiana:

Dear Sir—Under instructions from the State Board of Health of Kentucky, Dr. Bailey and myself are on a tour of investigation of the conditions of the smallpox epidemic in Indiana. Complaint has been made that this disease exists in nearly all the counties on the Ohio River, and that in many instances the officials of such counties are making little or no effort to protect their own citizens or the people of Kentucky. We are astonished that the disease has assumed almost epidemic proportions in nearly every part of your State, smallpox existing in sixty of the ninety-two counties. It will be our duty to make a full and frank report of this state of affairs to our board, and unless prompt steps are taken to bring the disease under control we will recommend that Kentucky establish a quarantine at the Ohio River, and that no person be permitted to cross without a certificate of recent successful vaccination and that the person has not recently been exposed to smallpox. We will regret exceedingly to adopt measures which seem so harsh against a neighboring State, but importations of smallpox from Indiana to Kentucky have been so frequent in the past, and the expense entailed upon the municipalities and counties thereby has been so great, that we feel that justice to our own people will

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demand it. I think it proper to giv
public of Indiana full notice of th
the hope that such action may be ta
antine unnecessary, or, failing in
for it. Very res

Secretary of the S

Dr. Taylor: I for one am w
invitation to the Health Officer
State and make an examination o
motion, as an expression of the o

Seconded and carried.

A vote of thanks was extended
of the States of Kentucky and O
ference.

Dr. Stanton and Dr. Bailey th
tention to the visiting Health Of

The conference then adourned

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ANNUAL STATISTICAL REPORT

FOR THE YEAR 1902.

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Deaths in Indiana D
Statistically Classi
100,000 Populatio

Classification Number.	C.
	I. Gene
1	**Typhoid fever**
2	**Exanthematous typhus**
3	**Recurrent fever**
4	**Intermittent fever**
4a	**Malarial fever**
5	**Variola or smallpox**
6	**Measles**
7	**Scarlatina**
8	**Whoopingcough**
9	**Croup**
9a	**Diphtheria**
10	**Influenza**
11	**Miliary fever**
12	**Asiatic cholera**
13	**Cholera nostras**
14	**Dysentery**
15	**Bubonic plague**
16	**Yellow fever**
17	**Leprosy**
18	**Erysipelas**
19	**Other epidemic affection**
20	**Purulent and septicæmic**
21	**Glanders and farcy**
22	**Malignant pustule and a**
23	**Rabies**
24	**Actinomycosis, trichinosi**
25	**Pellagra**
26	**Tuberculosis of larynx**
27	**Tuberculosis of lungs**
28	**Tuberculosis of meninges**
29	**Abdominal tuberculosis**
30	**Potts' disease**
31	**Cold abscess**
32	**White swelling**
33	**Other tubercular affection**
34	**General tuberculosis**
35	**Scrofula**
36	**Syphilis**
36a	**Soft chancre**
37	**Blennorrhagia of the adu**
38	**Gonorrhœal affections of t**
39	**Cancer and other tumors c**
40	**Cancer and other tumors c**
41	**Cancer and other tumors o**
42	**Cancer and other tumors o**
43	**Cancer and other tumors o**
44	**Cancer and other tumors o**
45	**Cancer and other tumors o**
46	**Other tumors**
47	**Acute articular rheumatis**
48	**Chronic rheumatism and g**
49	**Scorbutus**
50	**Diabetes**
51	**Exophthalmic goitre**
52	**Addison's disease**
53	**Leukemia**
54	**Anæmia and chlorosis**
55	**Other general diseases**
56	**Alcoholism, acute and chro**
57	**Saturnism**
58	**Other trade intoxications**
59	**Other chronic poisonings**

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TABLE 1—Continued.

Classification Number.	CAUSES OF DEATH.	Number of Deaths.	Death Rate Per 100,000.
	II. Local Diseases.—Diseases of the Nervous System and Organs of Special Sense.		
60	Encephalitis	133	5.2
61	Simple meningitis	509	20.2
61a	Epidemic cerebro-spinal meningitis	187	7.4
62	Progressive locomotor ataxia	40	1.5
63	Other diseases of the spinal cord	139	5.5
64	Cerebral congestion and hemorrhage	1,272	50 5
65	Cerebral softening	119	4.7
66	Paralysis without specified cause	762	30.2
67	General paralysis	68	2.7
68	Other forms of mental alienation	69	2.7
69	Epilepsy	118	4.6
70	Eclampsia (non-puerperal)	37	1.4
71	Convulsions of children	339	13.4
72	Tetanus	78	3.0
73	Chorea	6	.2
74	Other diseases of the nervous system	162	6.4
75	Diseases of the eye and its adnexa	.....	.....
76	Diseases of the ear	9	0.3
	III. Diseases of the Circulatory System.		
77	Pericarditis	58	2.3
78	Acute endocarditis	146	5.8
79	Organic diseases of the heart	1,860	73.9
80	Angina pectoris	179	7.1
81	Affection of arteries, atheroma, aneurism	137	5.4
82	Thrombosis and embolism	44	1.7
83	Affections of veins	11	.4
84	Affections of lymphatic system	7	.2
85	Hemorrhages	64	2.5
86	Other affections of circulatory system	2	.....
	IV. Diseases of the Respiratory System.		
87	Diseases of the nasal fossæ	4	.1
88	Affections of the larynx	60	2.3
89	Affections of thyroid body	2	.....
90	Acute bronchitis	290	11.5
91	Chronic bronchitis	194	7.7
92	Broncho-pneumonia	417	16 5
93	Pneumonia	2,349	93.3
94	Pleurisy	59	2.3
95	Pulmonary congestion and pulmonary apoplexy	363	14.4
96	Gangrene of the lung	6	.2
97	Asthma	110	4.3
98	Emphysema of the lungs	18	.7
99	Other diseases of respiratory system	152	6.0
	V. Diseases of the Digestive System.		
100	Affections of the mouth and its adnexa	24	.9
101	Affections of the pharynx	42	1.6
102	Affections of the œsophagus	6	.2
103	Ulcer of the stomach	61	2.4
104	Other affections of the stomach	580	23.0
105	Diarrhœa and enteritis (under 5 years)	1,779	70.6
105a	Chronic diarrhœa and enteritis	126	5.0
106	Diarrhœa and enteritis (5 years and over)	237	9.4
107	Intestinal parasites	1	.....
108	Hernia and intestinal obstructions	228	9.0
109	Other affections of the intestines	304	12.0
109a	Diseases of the anus and fecal fistulas	.....	.....
110	Icterus, grave	6	.2
111	Hyatid tumors of the liver	.....	.....
112	Cirrhosis of the liver	178	7.0
113	Biliary calculi	44	1.7
114	Other affections of the liver	302	12.0
115	Affections of the spleen	14	.5
116	Simple peritonitis	366	14.5
117	Other affections of the digestive system	.....	.....
118	Appendicitis and phlegmon of iliac fossa	145	5.7

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Classification Number.	C
	VI. Diseases
119	Nephritis, acute.....
120	Bright's disease.....
121	Other diseases of kidne
122	Calculi of the urinary.
123	Diseases of the bladder
124	Diseases of the urethra
125	Diseases of the prostat
126	Diseases of the male ge
127	Metritis.....
128	Uterine hemorrhage (n
129	Uterine tumor.....
130	Other diseases of the u
131	Cysts and other ovarian
132	Other diseases of femal
133	Non-puerperal diseases
	VII.
134	Accidents of pregnancy
135	Puerperal hemorrhage.
136	Other accidents of labo
137	Puerperal septicemia ..
138	Albuminuria and puerp
139	Phlegmasia alba dolens
140	Other puerperal accider
141	Puerperal diseases of th
	VIII. Diseases
142	Gangrene .....
143	Carbuncle.....
144	Phlegmon, warm absces
145	Other diseases of the sk
	IX. Diseas
146	Affections of the bones.
147	Arthritis and other dise
148	Amputation.....
149	Other affections of orga
	X
150	Malformations.....
	XI.
151	Congenital debility icte
152	Other diseases of early
153	Lack of care.....
	XII.
154	Senile debility..... ...
155	Suicide by poison.....
156	Asphyxia .....
157	Hanging or strangulati
158	Drowning.....
159	Firearms .....
160	Cutting instruments...
161	Jumping from high pla
162	Crushing.....
163	Other suicides .....

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TABLE 1—Continued.

Classification Number.	CAUSES OF DEATH.	Number of Deaths.	Death Rate Per 100,000.
	B.—Accidents.		
164	Fractures	190	7.5
165	Sprains	4	.1
166	Other accidental traumatisms	723	28.7
167	Burns and scalds	177	7.0
168	Burns from corrosive substances	5	.1
169	Insolation	9	.3
170	Freezing	8	.3
171	Electrical disturbances	38	1.5
172	Accidental submersion	111	4.4
173	Inanition	740	29.4
174	Absorption of deleterious gases	19	.7
175	Other acute poisonings	66	2.6
176	Other external violence	41	1.6
	C.—Homicide.		
176a	Homicide	36	1.4
	D.—Mob Violence.		
176b	Mob violence	1	.....
	XIV. Causes Ill-Defined.		
177	Dropsy	178	7.0
178	Sudden death	9	.3
179	Ill-defined or unspecified causes	217	8.6
	XV. Stillbirths.		
180	Stillbirths	1,914	76.0
	All causes	34,069	1,353.8

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TABLE 2—Continued.

STATE AND COUNTIES.	Population Based on Census, 1900.	Total Deaths Reported for the Year 1902.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.			Deaths From Important Causes.															
					Under 1 Year.	1 to 4, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrhœal Diseases, Under 5.	Cerebro-Spinal Meningitis.	Influenza.	Puerperal Septicemia.	Cancer.	Violence.
Miami	28,344	374	13.1	16	79	16	99	33	4	16	2	....	....	1	3	41	12	4	5	1	19	28
Newton	10,448	111	10.6	4	28	7	31	5	1	4	3	....	....	....	....	8	7	....	....	.....	5	4
Noble	23,533	254	10.7	13	41	20	95	23	2	3	.....	....	2	....	1	11	15	1	2	.....	10	11
Porter	19,175	239	12.4	12	53	10	74	22	5	5	2	....	1	....	1	22	8	.....	1	1	12	19
Pulaski	14,033	144	10.2	12	39	12	29	21	.....	3	4	....	....	1	3	12	11	....	1	2	2	6
Starke	10,431	128	12.2	6	34	12	33	11	.....	5	.....	....	....	...	2	4	5	2	3	.....	5	11
Steuben	15,219	168	11.0	1	22	8	66	15	2	3	2	....	3	....	....	14	6	2	2	1	16	19
St. Joseph	58,881	794	13.4	73	231	77	158	74	13	17	17	....	3	3	10	66	44	2	2	9	25	36
Wabash	28,235	359	12.7	22	76	17	118	24	3	17	4	....	2	....	....	22	23	4	.....	2	19	21
Wells	23,449	240	10.2	17	63	21	54	33	3	6	4	1	2	....	....	20	8	1	3	.....	8	7
White	19,138	211	11.0	15	56	19	59	23	2	6	.....	....	....	....	....	16	10	.....	6	2	9	13
Whitley	17,228	195	11.3	13	37	5	74	14	2	8	.....	....	....	1	1	15	5	1	.....	.....	9	11
Central Counties	1,024,791	14,665	14.3	828	3,187	1,085	3,744	1,640	220	520	187	20	66	34	53	1,198	695	81	126	46	519	761
Bartholomew	24,594	345	14.0	24	89	23	86	42	5	8	4	1	....	....	1	29	18	2	2	.....	17	13
Boone	26,321	328	12.4	22	70	16	114	35	9	17	1	1	1	....	....	25	8	.....	3	1	12	16
Brown	9,727	124	12.7	5	29	11	31	10	1	3	8	....	3	1	1	9	3	1	3	1	2	5
Clay	34,285	426	12.4	14	115	51	71	41	4	24	11	....	2	....	1	54	23	3	8	1	8	24
Clinton	28,202	397	14.0	19	76	46	106	33	5	17	2	....	3	....	....	32	31	3	5	.....	13	19
Decatur	19,518	295	15.1	20	75	30	89	36	4	8	.....	...	2	1	1	17	20	2	2	1	7	9
Delaware	49,624	704	14.1	53	177	54	146	61	7	38	11	2	2	3	4	52	40	4	5	5	16	42
Fayette	13,495	188	13.9	7	37	17	46	14	2	5	4	1	2	....	....	19	10	.....	5	1	14	15
Fountain	21,446	255	11.8	18	47	28	81	22	4	2	2	....	....	1	2	17	14	8	1	.....	9	14
Franklin	16,388	254	15.4	13	49	7	101	22	7	5	1	....	4	....	....	26	10	.....	7	2	9	11

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TABLE 2—Continued.

STATE AND COUNTIES.	Population Based on Census, 1900.	Total Deaths Reported for the Year 1902.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.			Deaths From Important Causes.													
					Under 1 Year.	1 to 4, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrhœal Disease, Under 5.	Cerebro-Spinal Meningitis.	Influenza.	Puerperal Septicemia.	Cancer.	Violence.
Ohio	4,724	63	13.3	1	8	4	20	8	2	3	....	....	....	....	....	4	1	....	....	....	....	1
Orange	16,854	189	11.2	14	40	13	45	35	5	10	2	1	1	....	1	12	5	....	6	1	5	6
Perry	18,778	259	13.7	10	49	31	73	38	4	9	3	2	....	....	....	36	13	....	2	1	9	10
Pike	20,486	346	16.8	13	86	57	48	60	7	25	8	....	1	3	7	39	33	....	....	....	8	16
Posey	22,333	359	16.0	17	72	50	73	53	5	20	5	....	4	....	4	44	30	....	1	2	7	21
Ripley	19,881	212	10.6	10	41	10	82	29	8	9	1	....	....	....	....	22	12	3	2	....	11	3
Scott	8,307	122	14.6	4	19	10	37	17	2	5	....	....	....	....	....	16	4	1	4	....	3	5
Spencer	22,407	325	14.5	14	78	26	75	45	3	15	....	....	3	1	1	27	23	....	5	2	10	19
Sullivan	26,005	361	13.8	22	106	36	75	44	3	18	3	1	....	....	12	25	23	2	5	2	5	16
Switzerland	11,840	162	13.6	14	34	15	43	20	5	4	7	....	2	....	....	12	11	....	....	3	8	3
Vanderburgh	71,769	952	13.2	57	220	64	163	128	15	20	5	....	1	....	2	73	49	5	7	1	32	46
Warrick	22,329	297	13.3	20	76	32	53	42	6	14	3	....	....	3	2	22	21	3	2	2	5	15
Washington	19,409	251	12.9	18	58	16	69	33	4	15	2	....	2	1	3	24	10	....	2	2	10	7

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TABLE 3—Continued.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Scrofula	2	2	3	2	3	4	1	.....	.....	1	2	.....
Soft chancre	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syphilis	3	2	8	5	5	4	5	4	6	2	3	5
Cancer of the mouth	5	3	4	1	3	2	3	5	4	2	3	5
Cancer of stomach and liver	33	29	24	36	39	46	34	49	42	41	28	39
Cancer of peritoneum, intestines and rectum	8	3	9	7	9	4	11	7	7	5	5	7
Cancer of female genital organs	16	15	17	15	11	16	33	17	17	16	13	5
Cancer of the breast	5	7	8	4	10	11	11	13	12	8	10	14
Cancer of the skin	2	10	5	3	6	3	5	6	8	11	6	4
Cancer of other organs	17	23	17	22	21	24	35	16	22	24	32	21
Other tumors	4	2	2	3	2	2	7	6	6	4	2	1
Acute articular rheumatism	7	17	17	5	9	6	8	4	9	6	10	10
Chronic rheumatism and gout	10	12	6	11	9	11	11	12	5	4	3	7
Scurvy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes	24	13	17	16	11	18	16	9	14	19	23	17
Gonorrhea (adults)	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gonorrhea (infants)	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Exophthalmic goiter	2	.....	1	1	1	1	1	4	2	1	1	.....
Addison's disease	.....	3	2	1	1	1	2	1	1	.....	1	1
Leukemia	4	.....	4	4	4	.....	2	3	1	3	.....	1
Anemia and chlorosis	8	5	12	6	8	8	14	12	10	5	5	7
Other general diseases	1	1	1	4	2	2	2	6	5	12	7	7
Alcoholism, acute and chronic	11	3	7	4	7	6	4	4	4	8	8	10
Lead poisonings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other chronic poisonings	1	2	3	.....	1	1	.....	1	.....	1	2	1
Encephalitis	12	7	9	16	10	13	14	7	10	9	12	14
Simple meningitis	28	45	58	51	42	38	49	45	34	42	33	44
Epidemic cerebro-spinal meningitis	15	18	21	18	17	16	9	14	22	10	10	17
Progressive locomotor ataxia	4	5	4	2	3	2	.....	2	6	3	4	5
Other diseases of spinal cord	13	5	14	8	14	13	15	10	10	13	7	17

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Congestion and hemorrhage of brain	110	100	134	109	130	98	109	112	90	91	82	107
Softening of brain	15	6	19	6	8	3	14	11	9	14	8	6
Paralysis, cause unspecified	58	91	57	71	62	51	63	58	74	63	60	54
General paralysis	4	5	7	3	9	5	5	8	3	3	8	8
Other forms of insanity	6	5	5	7	4	4	5	7	9	3	9	5
Epilepsy	12	11	10	9	21	9	9	7	5	8	9	8
Convulsions (not puerperal)	.....	1	2	6	1	1	2	5	8	5	2	4
Convulsions of infants	28	23	43	29	24	19	27	39	29	31	24	23
Tetanus	1	2	4	6	6	5	11	11	10	6	6	10
Chorea	.....	2	.....	.....	.....	1	1	.....	.....	.....	.....	2
Other nervous diseases	21	12	13	13	11	7	17	15	16	12	14	11
Diseases of the ear	1	1	.....	3	.....	.....	.....	1	.....	2	1	.....
Pericarditis	8	7	6	7	5	4	2	4	2	3	4	6
Acute endocarditis	21	16	16	27	10	7	15	7	3	8	6	10
Organic heart disease	171	145	168	172	154	155	140	167	134	137	142	175
Angina pectoris	12	20	13	19	17	15	9	9	15	14	16	20
Diseases of the arteries, atheroma, aneurism	14	7	12	13	13	12	12	12	5	10	16	11
Embolism and thrombosis	12	4	3	3	.....	4	2	2	4	4	5	1
Diseases of the veins (varices, hemorrhoids, phlebitis)	2	.....	.....	1	.....	2	.....	2	2	1	1	.....
Diseases of the lymphatics, lymphangitis	3	1	1	.....	.....	.....	.....	1	.....	.....	.....	1
Hemorrhage	4	10	4	6	3	5	10	4	5	6	3	4
Other diseases of circulatory system	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Diseases of the nasal fossæ	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	1
Diseases of the larynx	8	6	4	4	4	2	1	1	4	10	7	9
Diseases of the thyroid body	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Acute bronchitis	38	36	32	38	25	15	8	11	14	17	20	36
Chronic bronchitis	36	25	22	30	15	11	9	12	13	7	2	12
Broncho pneumonia	50	70	64	61	22	17	13	12	13	22	37	36
Pneumonia	381	424	391	279	155	66	47	58	71	110	134	233
Pleurisy	3	9	17	4	8	2	1	5	2	2	5	1
Congestion of the lungs, pulmonary apoplexy	42	41	42	31	30	21	10	27	29	27	25	38
Gangrene of the lung	2	.....	1	.....	1	.....	.....	.....	.....	1	.....	1
Asthma	10	8	20	7	10	3	6	6	16	9	3	12
Pulmonary emphysema	.....	1	3	2	2	3	.....	1	1	1	1	3
Other diseases of the respiratory system (phthisis excepted)	13	14	17	18	7	11	18	15	13	9	3	14
Diseases of the mouth and adnexa	1	1	.....	1	.....	2	5	5	1	7	.....	1
Diseases of the pharynx	5	.....	1	3	3	1	4	5	7	5	4	4
Diseases of the esophagus	.....	.....	1	.....	.....	.....	.....	2	1	.....	.....	2
Ulcer of the stomach	6	1	5	4	8	5	8	10	8	1	2	3
Other diseases of the stomach (cancer excepted)	37	46	39	54	44	40	66	54	62	48	52	38

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TABLE 3—Continued.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Diarrhea and enteritis (under four years)	15	14	14	21	29	116	455	569	337	130	56	23
Diarrhea, chronic	13	8	13	6	8	4	17	11	20	8	9	9
Diarrhea and enteritis (four years and over)	7	11	10	17	15	11	36	59	20	25	14	12
Intestinal parasites			1									
Hernia, intestinal obstructions	15	13	23	15	15	19	32	26	20	13	18	19
Other diseases of the intestines	24	27	17	20	15	20	35	39	38	33	21	15
Acute yellow atrophy of liver	1	1	1						1			2
Hyatid tumor of liver												
Cirrhosis of the liver	11	9	20	15	9	15	14	20	18	16	17	14
Biliary calculi	3	2	5	1	5	4	1	4	4	4	5	6
Other diseases of the liver	33	26	25	27	26	18	32	20	29	26	21	19
Diseases of the spleen	1		1	2	1	2	1		1		3	2
Simple peritonitis (not puerperal)	33	35	35	30	28	24	26	41	30	29	27	28
Other diseases of the digestive system (cancer and tub. ex.)												
Appendicitis and iliac abscess	10	8	16	9	5	17	15	17	16	11	8	13
Acute nephritis	16	7	12	24	6	8	17	12	17	12	9	10
Bright's disease	105	94	96	89	95	99	104	98	89	87	84	93
Other diseases of kidneys and adnexa	2	1	3	6	3	5	5	11	5	3	8	8
Urinary calculus	2		1	1	2				1			3
Diseases of the bladder	6	11	10	13	8	11	13	8	12	16	6	12
Diseases of the prostate	3	3	1	6	4	1	4	3	5	6	3	3
Non-venereal diseases of the male genital organs							1			1		
Metritis		1	2			1	2		1			
Uterine hemorrhage (not puerperal)					1						1	2
Uterine tumor (not cancerous)				1	1	1						2
Other diseases of the uterus		2	3	1	4	2	3	1	2	4	6	2
Ovarian cysts and other ovarian tumors	2	3	1		4		3	5	1	7	1	
Other diseases of female genital organs		1	1	1		1	2	4	2	2		
Diseases of breast (not puerperal, not cancerous)												
Accidents of pregnancy	2	2	4	7	2	1	2	3	5	3	1	

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Puerperal hemorrhage	1	4	3	1	4	1	3	3	.....	2	3	3
Other accidents of labor	1	4	1	.....	3	.....	.....	2	1	.....	1	1
Puerperal septicemia	11	17	18	17	15	3	5	10	14	4	11	11
Puerperal albuminuria and convulsions	3	7	1	7	10	7	8	4	.....	4	3	.....
Diseases of the urethra, urinary abscess, etc	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Puerperal phlegmasia alba dolens	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1
Other accidents of pregnancy, sudden death	2	3	3	1	2	2	.....	.....	.....	.....	.....	.....
Puerperal diseases of breast	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gangrene	12	7	9	11	12	13	6	7	4	10	3	13
Carbuncle	1	1	.....	.....	.....	3	.....	5	1	.....	.....	2
Phlegmon, acute abscess	3	7	5	4	3	1	4	3	4	.....	2	1
Other diseases of the skin and adnexa	3	.....	7	1	2	.....	1	1	1	3	1	4
Diseases of the bones, non-tuberculous	.....	.....	1	3	2	2	.....	1	2	1	4	1
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)	1	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....
Other diseases of organs of locomotion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital malformations (stillbirths not included)	17	9	24	12	21	15	7	10	9	9	7	22
Congenital debility, icterus and sclerema	83	74	80	91	87	87	109	101	93	105	91	122
Other diseases peculiar to infancy												

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TABLE 3—Continued.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Other acute poisoning	7	3	2	6	8	8	3	4	7	7	6	5
Other external violence	.....	1	9	.....	8	2	2	2	3	2	.....	12
Homicide	2	.....	5	2	5	3	1	3	5	2	1	1
Mob violence	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Dropsy	20	17	10	16	18	14	16	16	13	11	19	8
Sudden death (not puerperal)	2	2	.....	.....	1	.....	.....	.....	1	.....	.....	3
Causes not specified or ill defined	18	17	15	16	24	30	13	12	12	10	19	31

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TABLE 3—Continued.

Showing Deaths from All Causes by Months, Ages, Color, Nationality, and Condition, for the Year Ending December 31, 1902. Bertillon Classification.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
All causes (stillbirths included)	7,621	1,410	614	337	270	829	680	1,185	1,577	1,429	1,284	1,193	1,277	1,174	1,301	1,437	1,674	2,023

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TABLE 3—Continued.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
Scrofula	12	3	1	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	.....	1	.....	.....
Soft chancre	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syphilis	21	.....	.....	.....	.....	.....	.....	1	4	3	3	2	4	4	3	1	2	.....
Cancer of the mouth	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	1	2	2	4	5	10
Cancer of the stomach and liver	.....	.....	.....	.....	.....	.....	.....	1	2	3	8	11	27	24	35	47	80	74
Cancer of peritoneum, intestines and rectum	.....	.....	.....	.....	.....	.....	2	.....	3	3	5	2	8	5	8	9	15	10
Cancer of female genital organs	.....	.....	.....	.....	.....	.....	.....	1	2	3	4	19	19	27	32	19	33	17
Cancer of the breast	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	11	9	13	22	17	9
Cancer of the skin	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	4	5	6	5	9
Cancer of other organs	.....	.....	3	.....	1	2	1	4	4	4	7	13	16	19	30	38	28	28
Other tumors	2	.....	.....	1	.....	1	.....	.....	1	1	1	.....	7	3	3	4	4	3
Acute articular rheumatism	.....	.....	1	1	.....	5	8	8	6	7	7	3	4	4	3	7	8	6
Chronic rheumatism and gout	.....	.....	.....	.....	.....	1	2	1	3	2	3	3	1	4	7	6	11	21
Scurvy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes	.....	1	2	1	1	8	7	8	8	8	8	10	11	9	10	19	23	18
Gonorrhea (adults)	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....
Gonorrhea infants	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exophthalmic goiter	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	1	5	1	3	2	.....	.....
Addison's disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	3	4	.....	1	.....
Leukemia	.....	.....	.....	1	.....	2	3	2	3	.....	1	.....	2	3	2	2	1	2
Anemia and chlorosis	9	1	2	1	.....	1	3	4	12	7	3	6	4	6	6	5	12	8
Other general diseases	13	9	1	.....	.....	1	.....	2	2	1	.....	1	.....	4	3	.....	4	5
Alcoholism, acute and chronic	.....	.....	.....	.....	.....	.....	.....	.....	1	6	8	5	13	6	7	12	11	4
Lead poisonings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other chronic poisonings	.....	.....	.....	.....	.....	.....	1	.....	1	1	1	1	1	.....	.....	5	1	.....
Encephalitis	47	16	9	5	3	12	7	2	6	.....	4	5	2	3	2	.....	4	3
Simple meningitis	183	78	34	27	11	32	16	17	18	12	10	14	12	9	4	8	4	6
Epidemic cerebro-spinal meningitis	54	35	17	5	7	21	13	11	6	4	5	.....	3	3	.....	1	1	.....
Progressive locomotor ataxia	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	5	7	2	2	.....	5	8
Other diseases of spinal cord	12	4	1	2	2	7	1	2	2	1	3	10	9	9	9	12	10	12

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Congestion and hemorrhage of brain	111	21	12	6	2	13	12	9	9	13	24	36	36	46	90	89	114	152
Softening of brain	2			1						1	2	1	5	5	5	10	14	11
Paralysis, cause unspecified	5	3	2		1	1	4	6	5	4	7	11	17	16	28	49	75	107
General paralysis						2	1	1			1	8	7	5	6	8	11	4
Other forms of insanity			1			1		1	1	5	8	3	7	11	8	3	7	6
Epilepsy	4			3		3	2	17	12	10	15	11	5	8	3	2	5	5
Convulsions (not puerperal)					1	6	3	2	3	3	3	4	4	2		1		2
Convulsions of infants	297	22	10		6	2												
Tetanus	12	2	1		1	13	15	3	3	4	6	4	3	3		4		1
Chorea		1				1	2										1	
Other nervous diseases	20	9	8	2	6	2	4	4	4	7	7	8	6	8	11	9	14	17
Diseases of the ear	2	1		2		1	1	1								1		
Pericarditis	3			2		3	4	3	4	1		1	3	4	2	1	2	5
Acute endocarditis	1	1	3	1	1	7	9	5	5	5	4	5	10	8	4	10	15	10
Organic heart disease	36	2	3	3	2	23	24	36	34	31	32	46	73	85	110	154	226	260
Angina pectoris	1					2	1		3	3	3	4	7	7	14	23	19	32
Dis. of the arteries, atheroma, aneurism	1					5	1		1	1	2	4	4	5	6	12	14	22
Embolism and thrombosis									3	4	3		2	1	3	5	4	4
Diseases of the veins (varices, hemorrhoids, phlebitis)												2	1	1	2	1		1
Diseases of the lymphatics, lymphangitis	2					1	1			1	1							
Hemorrhage	19	3	1			3	3	1	4	1	4			1	6	5	3	6
Other diseases of circulatory system	1																	
Diseases of the nasal fossæ	2							1										1
Diseases of the larynx	11	7	7	5	2	5	2	1	4		3	5	1	1		1	2	2
Diseases of the thyroid body																1	1	
Acute bronchitis	129	36	10	2	4	4	2	1	6	1		1	1	2	1	6	5	9
Chronic bronchitis	1	1	1		1	2		1	2	3	1	2	5	5	11	13	12	25
Broncho pneumonia	146	59	20	9	12	16	5	6	7	5	3	5	7	9	2	8	12	16
Pneumonia	432	168	86	31	24	69	45	78	92	74	77	64	90	74	105	88	118	167
Pleurisy	2	1				1		3		4	3	2	4	5	5	3	1	5
Congestion of lungs, pulmonary apoplexy	114	19	7	4	3	8	5	9	8	7	16	11	7	4	11	16	12	22
Gangrene of the lung		1								1		1	2		1			
Asthma	3	1		1		1					1	2	4	5	4	9	11	22
Pulmonary emphysema	1				2		1			1		2		2	2			1
Other diseases of the respiratory system (phthisis excepted	16	3	1	1		3	6	8	9	9	6	4	5	12	8	8	3	12
Diseases of the mouth and adnexa	11	9	1			2						1						
Diseases of the pharynx	7	3	2	3	9	8	2	1	3			2				1		
Diseases of the esophagus			1									1						2
Ulcer of the stomach		2							4	2	3	4	6	7	3	5	11	8
Other diseases of the stomach (cancer ex.)	115	35	4	9	1	8	7	7	15	15	12	25	17	14	28	37	37	52

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TABLE 3—Continued.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
Diarrhea and enteritis (under four years)	1,068	529	140	33	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhea, chronic	.....	1	.....	.....	.....	.....	1	.....	1	2	1	2	1	1	4	13	20	17
Diarrhea and enteritis (four years and over)	.....	.....	.....	1	3	14	5	4	9	7	6	16	9	11	12	13	17	21
Intestinal parasites	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hernia, intestinal obstructions	21	9	3	2	2	9	7	10	6	6	10	11	8	9	16	16	17	19
Other diseases of the intestines	99	26	10	5	2	5	5	3	4	10	10	7	5	7	12	6	12	9
Acute yellow atrophy of liver	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Hyatid tumor of liver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cirrhosis of the liver	1	.....	.....	.....	.....	1	2	1	1	2	6	6	12	13	18	28	20	29
Biliary calculi	2	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	2	3	2	4	9	5
Other diseases of the liver	28	4	1	3	1	1	5	4	7	10	5	14	15	17	20	32	31	25
Diseases of the spleen	1	1	.....	.....	.....	1	1	.....	.....	.....	1	2	2	1	.....	.....	1	1
Simple peritonitis (not puerperal)	15	4	2	3	4	19	22	33	37	28	25	38	30	19	11	10	11	18
Other diseases of the digestive system (cancer and tuberculosis excepted)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Appendicitis and iliac abscess	1	.....	1	.....	1	11	28	24	13	7	6	12	9	11	4	4	1	6
Acute nephritis	11	2	2	3	2	13	10	6	3	7	6	8	7	8	5	11	10	11
Bright's disease	11	4	4	1	2	12	12	20	24	36	32	37	51	66	82	85	103	149
Other diseases of kidneys and adnexa	1	.....	.....	.....	.....	.....	.....	.....	1	1	1	2	2	2	3	2	8	7
Urinary calculus	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	1	1	1	.....	.....	.....
Diseases of the bladder	2	1	1	.....	.....	.....	1	.....	2	2	.....	4	4	2	3	3	11	18
Diseases of the prostate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	3	4	8
Non-venereal diseases of the male genital organs	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Metritis	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	2	.....	.....	.....	.....	1	.....
Uterine hemorrhage (not puerperal)	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1	.....	.....	.....	.....	.....
Uterine tumor (not cancerous)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Other diseases of the uterus	.....	.....	.....	.....	.....	.....	1	1	3	3	2	6	6	3	2	1	1	.....
Ovarian cysts and other ovarian tumors	.....	.....	.....	.....	.....	.....	.....	.....	2	3	4	.....	2	3	4	1	2	2
Other diseases of the female genital organs	.....	.....	.....	.....	.....	.....	.....	.....	1	5	3	2	1	.....	1	.....	.....	1
Diseases of the breast (not puerperal, not cancerous)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Accidents of pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	5	10	8	4	5	.....	.....	.....	.....	.....

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Puerperal hemorrhage								2	8	5	6	3	4					
Other accidents of labor								2	1	2	2	3	3	1				
Puerperal septicemia								18	26	26	31	19	16					
Puerperal albuminuria and convulsions								13	10	13	6	7	3	2				
Diseases of the urethra, urinary abscess, etc.													1			1	1	
Puerperal phlegmasia alba dolens										1	1		1					
Other accidents of pregnancy, sudden death									1	1	7	2	2					
Puerperal diseases of breast																		
Gangrene		2	1			1	1	1	1	2	2	2	1	2	4	8	9	9
Carbuncle								1			1			1	4	3	1	1
Phlegmon, acute abscess	3			1	1	3	1	2	2	3	2		2	1	4		2	2
Other diseases of the skin and adnexa	11		1						1	1	1	1		1		1	2	1
Diseases of the bones, non-tuberculous	4	2	1		2	1	1								1	1	1	2
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted)						1										1	2	
Other diseases of organs of locomotion																		
Congenital malformations (stillbirths not included)	158	2	1		1													
Congenital debility, icterus and sclerema	1,109																	
Other diseases peculiar to infancy	72																	
Neglect	2																	
Senile debility														1				3
Suicide by **poisoning**							1	15	25	17	11	13	8	10	8	7	7	4
Asphyxia									1			1						1
Hanging or **strangulation**								1	6	1	4	2	2	8	2	3	3	2
Drowning								1		1	2	2		1	3			
Firearms								8	3	3	6	9	7	3	7	3	5	4
Cutting instruments										1		3	1	3	1		1	
Precipitation from height												1						
Crushing																		
Other methods								3	4	1			3		1			
Fractures	1		2	3	2	8	2	10	14	11	10	9	10	8	7	10	9	9
Dislocations													1	1			1	
Other accidental injuries	20	6	3	6	3	31	42	57	81	66	53	56	48	34	38	28	33	33
Burning by fire	8	17	19	16	12	22	7	7	11	7	6	7	6	7	1	3		1
Burning by corrosive substances										1		3			1			
Sunstroke											2	1	1		1			1
Freezing											1	1	1		1			
Electrical shock						1	3	3	7	3	4	2	5	3	1	4		1
Accidental drowning		3	3	3	2	9	16	25	7	10	5	7	3	2	3	3	3	2
Inanition	641	26	1	2	3	5	3	3	2		3		1	3	1	3	5	3
Inhalation of noxious gases (not suicidal)	9	1				1				1	1	2			1	1	1	1

TABLE 3—Continued.

	Under 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
	0.	1.	2.	3.	4.													
Other acute poisoning	4	5	8	4	1	2	1	3	7	2	5	2	4	4	1	5	2	2
Other external violence	15	6	.....	.....	.....	.....	1	1	.....	4	4	1	.....	1	2	.....	1	2
Homicide	4	.....	.....	.....	.....	.....	.....	4	6	3	3	3	4	8	.....	1	.....	.....
Mob violence	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dropsy	1	2	.....	.....	1	1	.....	4	4	4	1	2	7	10	7	9	25	20
Sudden death (not puerperal)	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	1	1	2
Causes not specified or ill defined	61	4	2	.....	.....	2	6	4	7	6	7	5	4	12	9	11	22	30

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TABLE 3—Continued.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Scrofula	.....	.....	.....	.....	.....	20	.....	20	.....	.....	18	1	1	.....	20
Soft chancre	1	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	.....	.....	1
Syphilis	3	.....	.....	.....	1	48	4	48	3	1	37	9	5	1	52
Cancer of mouth	6	4	3	.....	.....	40	.....	30	10	.....	3	25	11	1	40
Cancer of the stomach and liver	71	35	16	4	2	434	6	333	102	5	30	271	135	4	440
Cancer of peritoneum, intestines and rectum	4	4	2	.....	2	81	1	68	11	3	11	56	15	.....	82
Cancer of female genital organs	5	7	2	.....	1	187	4	179	12	.....	10	130	50	1	191
Cancer of the breast	9	8	9	.....	.....	111	2	102	9	2	12	62	39	.....	113
Cancer of the skin	8	10	15	2	1	68	1	60	8	1	5	38	26	.....	69
Cancer of other organs	24	28	18	3	3	270	4	235	36	3	31	169	71	3	274
Other tumors	5	3	1	1	.....	37	4	38	3	.....	9	20	11	1	41
Acute articular rheumatism	13	10	5	.....	2	101	7	92	14	2	38	57	13	.....	108
Chronic rheumatism and gout	18	8	8	.....	2	94	7	84	15	2	14	59	27	1	101
Scurvy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes	19	18	5	.....	3	195	2	172	24	1	45	106	43	3	197
Gonorrhea (adults)	.....	.....	.....	.....	.....	2	.....	1	.....	1	2	.....	.....	.....	2
Gonorrhea (infants)	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	1
Exophthalmic goiter	.....	.....	.....	.....	.....	15	.....	13	2	.....	1	13	1	.....	15
Addison's disease	.....	2	.....	.....	1	14	.....	13	1	.....	3	9	2	.....	14
Leukemia	1	.....	.....	.....	1	26	.....	26	.....	.....	11	13	2	.....	26
Anemia and chlorosis	3	5	2	.....	.....	98	2	93	6	1	29	56	14	1	100
Other general diseases	2	1	1	.....	.....	46	4	42	7	1	28	13	8	1	50
Alcoholism, acute and chronic	1	1	.....	.....	1	74	2	65	9	2	23	29	22	2	76
Lead poisonings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other chronic poisonings	.....	.....	1	.....	.....	13	.....	13	.....	.....	3	5	5	.....	13
Encephalitis	2	.....	1	.....	.....	131	2	131	2	.....	107	22	3	1	133
Simple meningitis	4	3	7	.....	.....	494	15	500	8	1	428	68	12	1	509
Epidemic cerebro-spinal meningitis	1	.....	.....	.....	.....	184	3	186	1	.....	173	14	.....	.....	187
Progressive locomotor ataxia	1	5	1	.....	1	38	2	35	5	.....	10	21	8	1	40
Other diseases of the spinal cord	13	10	8	.....	.....	136	3	127	11	1	46	72	20	1	139

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TABLE 3—Continued.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported	Total.
Diarrhœa and enteritis (under four years)	.....	.....	.....	.....	.....	1,732	47	1,779	.....	.....	1,779	.....	.....	.....	1,779
Diarrhœa, chronic	24	16	19	3	.....	123	3	113	11	2	13	83	29	1	126
Diarrhœa and enteritis (four years and over)	23	34	31	1	.....	228	9	196	35	6	48	108	79	2	237
Intestinal parasites	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	1
Hernia, intestinal obstructions	19	12	14	.....	2	224	4	207	19	2	85	96	44	3	228
Other diseases of the intestines	25	20	19	2	1	296	8	281	18	5	177	77	45	5	304
Acute yellow atrophy of liver	1	1	1	.....	.....	6	.....	5	1	.....	2	3	1	.....	6
Hyatid tumor of liver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cirrhosis of the liver	23	9	5	.....	1	171	7	127	49	2	16	106	43	3	178
Biliary calculi	4	2	5	.....	.....	44	.....	38	6	.....	2	31	11	.....	44
Other diseases of the liver	37	21	17	1	3	292	10	265	35	2	64	162	75	1	302
Diseases of the spleen	.....	1	1	.....	.....	14	.....	13	1	.....	4	7	3	.....	14
Simple peritonitis (not puerperal)	16	8	8	2	3	348	18	333	28	5	133	193	34	6	366
Other diseases of the digestive system (cancer and tub. excepted)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Appendicitis and iliac abscess	1	1	.....	.....	4	142	3	135	9	1	81	55	8	1	145
Acute nephritis	7	10	7	.....	1	142	8	126	21	3	59	60	30	1	150
Bright's disease	168	138	85	6	5	1,090	43	935	181	17	181	627	309	16	1,133
Other diseases of kidneys and adnexa	11	12	6	.....	1	60	.....	48	11	1	8	38	14	.....	60
Urinary calculus	1	3	.....	.....	.....	10	.....	8	1	1	1	7	1	1	10
Diseases of the bladder	17	22	30	2	1	121	5	101	23	2	13	67	42	4	126
Diseases of the prostate	6	11	5	2	.....	39	3	32	9	1	4	28	9	1	42
Non-venereal diseases of the male genital organs	.....	.....	.....	.....	.....	2	.....	2	.....	.....	2	.....	.....	.....	2
Metritis	.....	.....	.....	.....	.....	7	.....	6	1	.....	2	3	2	.....	7
Uterine hemorrhage (not puerperal)	.....	.....	.....	.....	.....	4	.....	4	.....	.....	1	3	.....	.....	4
Uterine tumor (not cancerous)	.....	1	.....	.....	.....	4	1	4	1	.....	.....	2	3	.....	5
Other diseases of the uterus	.....	1	.....	.....	.....	29	1	29	1	.....	8	20	2	.....	30
Ovarian cysts and other ovarian tumors	3	.....	1	.....	.....	27	.....	24	3	.....	4	18	5	.....	27
Other diseases of female genital organs	.....	.....	.....	.....	.....	11	3	14	.....	.....	2	11	1	.....	14
Diseases of breast (not puerperal, not cancerous)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Accidents of pregnancy	.....	.....	.....	.....	.....	32	.....	29	3	.....	.....	32	.....	.....	32

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TABLE 3—Continued.

	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Other acute poisoning	.....	1	2	.....	1	66	.....	60	5	1	36	21	8	1	66
Other external violence	1	.....	2	.....	.....	39	2	35	4	2	23	9	6	.....	41
Homicide	.....	.....	.....	.....	.....	29	7	30	5	1	16	19	.....	1	36
Mob violence	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	1
Dropsy	24	31	21	2	2	169	9	149	28	1	35	78	61	4	178
Sudden death (not puerperal)	.....	1	.....	.....	1	9	.....	8	.....	1	2	5	2	.....	9
Causes not specified or ill defined	6	3	2	.....	14	206	11	183	25	9	113	63	32	9	217

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TABLE 4—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cass	Total	45	30	42	49	28	36	48	49	44	33	30	40
	Males	21	15	25	26	16	20	22	30	20	19	15	25
	Females	24	15	17	23	12	16	26	19	24	14	15	15
Clark	Total	49	43	46	36	36	37	48	47	31	32	37	46
	Males	25	20	24	14	23	18	21	27	21	15	22	23
	Females	24	23	22	22	13	19	27	20	10	17	15	20
Clay	Total	49	44	34	40	34	25	35	38	36	30	23	38
	Males	28	22	14	20	14	15	15	17	20	17	9	18
	Females	21	22	20	20	20	10	20	21	16	13	14	20
Clinton	Total	21	31	38	28	35	13	36	53	51	30	37	24
	Males	10	17	20	12	14	8	16	30	24	21	17	11
	Females	11	14	18	16	21	5	20	23	27	9	20	13
Crawford	Total	20	16	14	11	13	11	14	17	16	12	12	8
	Males	13	9	3	7	8	6	11	10	13	8	6	7
	Females	7	7	11	4	5	5	3	7	3	4	6	1
Daviess	Total	38	40	30	33	27	30	51	37	41	35	22	32
	Males	24	16	18	16	20	13	25	15	16	17	9	16
	Females	14	24	12	17	7	17	26	22	25	18	13	16
Dearborn	Total	14	32	30	30	14	12	31	37	14	33	29	23
	Males	7	15	17	8	5	8	13	19	5	20	16	17
	Females	7	17	13	22	9	4	18	18	9	13	13	6
Decatur	Total	25	24	22	21	32	18	34	32	28	25	17	17
	Males	12	12	7	11	15	10	14	15	14	10	9	5
	Females	13	12	15	10	17	8	20	17	14	15	8	12
Dekalb	Total	25	33	17	24	18	22	21	38	36	22	25	28
	Males	11	23	8	15	10	9	11	21	23	15	18	11
	Females	14	10	9	9	8	13	10	17	13	7	7	17

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Delaware	Total	52	32	68	54	46	57	76	77	56	56	52	58
	Males	28	25	44	20	20	36	45	45	31	28	31	25
	Females	24	27	24	34	26	21	31	32	25	30	21	33
Dubois	Total	18	30	25	22	22	16	32	27	17	17	23	23
	Males	6	14	16	10	8	8	12	12	7	9	10	14
	Females	12	16	9	12	14	8	20	15	10	8	13	9
Elkhart	Total	48	52	52	34	56	35	44	51	58	35	34	43
	Males	23	24	26	16	26	18	25	26	29	17	22	24
	Females	25	28	26	18	30	17	19	25	29	18	12	19
Fayette	Total	15	18	21	18	18	15	10	18	18	13	9	15
	Males	11	9	11	9	9	7	8	12	9	7	6	3
	Females	4	9	10	9	9	8	2	6	9	6	3	12
Floyd	Total	41	33	43	39	33	36	53	41	40	39	24	37
	Males	20	20	23	22	21	24	31	17	22	12	16	18
	Females	21	13	20	17	12	12	22	24	18	27	8	19

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TABLE 4—Continued.

COUNTIES.	SEX.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Hancock	Total	28	20	27	23	15	21	34	27	21	24	25	21
	Males	15	8	10	9	8	15	19	12	14	16	13	3
	Females	13	12	17	14	7	6	15	15	7	8	12	18
Harrison	Total	28	19	21	22	15	21	19	21	27	24	15	25
	Males	12	10	9	7	10	14	9	10	14	12	6	15
	Females	16	9	12	15	5	7	10	11	13	12	9	10
Hendricks	Total	26	29	23	22	17	24	24	26	24	23	13	28
	Males	12	12	14	11	8	14	17	13	11	13	8	14
	Females	14	17	9	11	9	10	7	13	13	10	5	14
Henry	Total	27	37	35	36	33	22	48	42	29	26	34	25
	Males	10	21	20	24	16	11	23	22	18	13	17	15
	Females	17	16	15	12	23	11	25	20	11	13	17	10
Howard	Total	21	23	41	29	25	26	32	38	43	26	27	14
	Males	10	14	22	13	12	12	17	15	20	12	14	4
	Females	11	9	19	16	13	14	15	23	23	14	13	10
Huntington	Total	25	34	31	20	21	25	22	42	33	29	19	35
	Males	15	16	22	16	10	10	11	23	17	20	9	17
	Females	10	18	9	13	11	15	11	19	16	9	10	18
Jackson	Total	42	26	35	27	39	32	25	30	41	35	33	39
	Males	22	12	15	12	20	17	14	18	24	20	14	17
	Females	20	14	20	15	19	15	11	12	17	15	19	22
Jasper	Total	12	17	10	15	9	6	7	13	8	7	5	6
	Males	7	9	6	10	4	4	4	4	5	5	4	3
	Females	5	8	4	5	5	2	3	9	3	2	1	3
Jay	Total	28	34	37	36	28	22	30	35	35	21	20	27
	Males	14	19	25	16	13	9	21	16	16	15	13	18
	Females	14	15	12	20	15	13	9	19	19	6	7	9

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Jefferson	Total	25	22	37	32	22	34	39	31	31	27	23	31
	Males	12	12	14	17	13	18	23	11	16	11	10	19
	Females	13	10	23	15	9	16	16	20	15	16	13	12
Jennings	Total	19	9	18	19	21	12	20	17	29	13	12	17
	Males	7	6	8	9	9	6	11	8	15	5	8	7
	Females	12	3	10	10	12	6	9	9	14	8	4	10
Johnson	Total	19	16	18	8	27	22	31	24	24	23	14	17
	Males	12	7	5	5	12	7	18	9	4	15	5	7
	Females	7	9	13	3	15	15	13	15	20	8	9	10
Knox	Total	38	55	33	47	38	40	41	21	45	49	40	29
	Males	23	30	18	25	19	22	22	11	21	23	25	15
	Females	15	25	15	22	19	18	19	10	24	26	15	14
Kosciusko	Total	27	28	36	26	29	22	16	38	29	23	30	37
	Males	11	16	18	11	14	8	12	16	12	16	12	16
	Females	16	12	18	15	15	14	4	22	17	7	18	21
Lagrange	Total	18	20	21	21	9	10	9	14	16	13	12	17
	Males	7	12	9	8	5	5	2	7	11	6	6	7
	Females	11	8	12	13	4	5	7	7	5	7	6	10
Lake	Total	35	62	53	57	40	31	36	49	60	53	43	39
	Males	18	35	29	35	18	16	23	30	37	37	24	25
	Females	17	27	24	22	22	15	13	19	23	16	19	14
Laporte	Total	51	38	39	45	50	29	44	46	47	34	36	43
	Males	27	21	20	29	32	14	22	20	26	23	17	21
	Females	24	17	19	16	18	15	22	26	21	11	19	22
Lawrence	Total	28	28	22	22	23	23	33	29	28	31	27	26
	Males	13	18	10	14	11	11	16	20	16	14	16	16
	Females	15	10	12	8	12	12	17	9	12	17	11	10
Madison	Total	84	90	88	77	76	57	107	115	89	78	74	75
	Males	46	44	44	44	44	36	51	48	55	42	45	40
	Females	38	46	44	33	32	21	56	67	34	36	29	35
Marion	Total	271	290	258	285	219	239	310	288	246	250	275	292
	Males	126	156	127	151	105	119	169	154	133	131	150	141
	Females	145	134	131	134	114	120	141	134	113	119	125	151
Marshall	Total	23	18	35	36	26	16	20	27	16	24	20	29
	Males	14	8	16	21	15	9	9	14	7	13	13	14
	Females	9	10	19	15	11	7	11	13	9	11	7	15

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TABLE 4—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Martin	Total	22	20	18	13	10	10	17	17	11	13	12	9
	Males	14	9	9	8	4	7	5	9	4	7	7	5
	Females	8	11	9	5	6	3	12	8	7	6	5	4
Miami	Total	33	37	29	27	30	28	36	39	32	25	33	25
	Males	17	20	14	12	15	19	18	18	16	15	19	13
	Females	16	17	15	15	15	9	18	21	16	10	14	12
Monroe	Total	23	25	24	19	22	15	33	32	28	27	29	18
	Males	14	15	11	9	12	7	17	17	14	10	18	10
	Females	9	10	13	10	10	8	16	15	14	17	11	8
Montgomery	Total	32	33	39	36	28	20	32	39	43	29	37	27
	Males	11	21	16	16	13	10	15	22	19	14	18	19
	Females	21	12	23	20	15	10	17	17	24	16	19	8
Morgan	Total	15	19	21	20	16	13	26	26	11	12	16	20
	Males	7	9	10	12	9	11	16	13	7	3	7	9
	Females	8	10	11	8	7	7	10	13	4	9	9	11
Newton	Total	12	6	12	5	9	9	10	9	10	6	10	13
	Males	8	2	6	3	6	8	4	.....	7	4	6	8
	Females	4	4	6	2	3	1	6	9	3	2	4	5
Noble	Total	25	17	18	24	27	19	16	23	30	13	14	28
	Males	12	7	10	13	13	14	12	15	16	6	10	12
	Females	13	10	8	11	14	5	4	8	14	7	4	16
Ohio	Total	5	6	7	4	5	3	8	9	5	5	3	3
	Males	2	2	4	3	3	1	6	2	2	1	2	2
	Females	3	4	3	1	2	2	2	7	3	4	1	1
Orange	Total	20	23	13	9	12	11	8	23	17	22	15	16
	Males	4	13	5	3	4	6	4	9	12	4	6	8
	Females	16	10	8	6	8	5	4	14	5	18	9	8

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TABLE 4—Continued.

COUNTIES.	SEX.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Shelby	Total	34	33	38	41	27	15	23	47	31	28	21	30
	Males	16	22	18	21	15	6	12	26	21	14	14	20
	Females	18	11	20	20	12	9	11	21	10	14	7	10
Spencer	Total	26	26	28	30	22	23	20	41	32	25	25	27
	Males	13	14	17	13	15	12	9	17	18	11	11	10
	Females	13	12	11	17	7	11	11	24	14	14	14	17
Starke	Total	13	9	12	18	6	7	15	15	8	10	6	9
	Males	7	5	6	10	4	5	9	9	6	3	5	7
	Females	6	4	6	8	2	2	6	6	2	7	1	2
Steuben	Total	17	12	22	22	9	14	9	9	12	13	11	18
	Males	9	8	10	10	5	7	5	5	7	7	6	8
	Females	8	4	12	12	4	7	4	4	5	6	5	10
St. Joseph	Total	55	59	75	67	66	60	55	63	65	72	75	82
	Males	26	35	43	39	36	28	32	30	39	35	38	45
	Females	29	24	32	28	30	32	23	33	26	37	37	37
Sullivan	Total	39	27	30	30	16	26	28	37	39	29	26	34
	Males	17	13	11	10	11	18	13	19	22	15	11	14
	Females	22	14	19	20	5	8	15	18	17	14	15	20
Switzerland	Total	15	17	16	15	15	8	10	17	12	14	14	9
	Males	9	7	8	7	5	6	8	4	4	8	5	4
	Females	6	10	8	8	10	2	2	13	8	6	9	5
Tippecanoe	Total	36	53	57	52	45	28	49	50	41	41	43	39
	Males	20	28	30	31	22	18	25	28	26	25	22	16
	Females	16	25	27	21	23	10	24	22	15	16	21	23
Tipton	Total	20	23	20	15	17	14	23	36	21	16	16	11
	Males	12	11	11	6	10	9	14	24	13	8	6	8
	Females	8	12	9	9	7	5	9	12	8	8	10	3

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TABLE 4—Continued.

COUNTIES.	Sex.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Whitley	Total	21	18	28	14	16	19	11	23	11	16	9	9
	Males	12	12	9	4	9	8	7	13	9	6	5	5
	Females	9	6	19	10	7	11	4	10	2	10	4	4
Total males		1,507	1,533	1,599	1,459	1,308	1,241	1,600	1,710	1,571	1,411	1,342	1,428
Total females		1,462	1,407	1,529	1,134	1,269	1,059	1,439	1,595	1,400	1,289	1,170	1 307
Grand total		2,969	2,940	3,128	2,893	2,577	2,300	3,039	3,305	2,971	2,700	2,512	2,735

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TABLE 4—Continued.

COUNTIES.	SEX.	UNDER 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
		0.	1.	2.	3.	4.													
Cass	Total	90	14	4	3	.....	11	9	12	18	22	21	30	31	19	27	17	27	27
	Males	50	5	4	.....	.....	8	5	3	12	7	7	13	15	15	21	8	16	13
	Females	40	9	.....	3	.....	3	4	9	6	15	14	17	16	4	6	9	11	14
Clark	Total	115	21	7	5	2	7	16	20	31	29	23	15	13	16	9	19	25	24
	Males	63	12	3	1	1	4	4	10	17	21	12	7	8	4	4	11	18	12
	Females	52	9	4	4	1	3	12	10	14	8	11	8	5	12	5	8	7	12
Clay	Total	115	33	11	4	3	23	17	18	19	14	9	15	17	10	10	14	19	15
	Males	53	20	7	3	1	13	4	6	5	6	6	6	8	8	4	9	10	9
	Females	62	13	4	1	2	10	13	12	14	8	3	9	9	2	6	5	9	6
Clinton	Total	76	26	11	6	3	8	11	19	18	18	11	9	15	11	16	13	18	19
	Males	30	14	6	2	2	5	5	8	9	8	7	3	9	7	7	8	13	7
	Females	46	12	5	4	1	3	6	11	9	10	4	6	6	4	9	5	5	12
Crawford	Total	24	7	4	1	.....	7	4	12	13	7	7	5	10	7	3	3	9	5
	Males	14	6	2	.....	.....	5	3	10	8	3	4	5	3	6	1	.....	6	2
	Females	10	1	2	1	.....	2	1	2	5	4	3	.....	7	1	2	3	3	3
Daviess	Total	103	20	8	3	10	13	6	16	18	17	15	15	16	12	12	21	18	23
	Males	51	12	3	3	5	5	3	9	7	5	6	5	8	4	5	13	8	15
	Females	52	8	5	.....	5	8	3	7	11	12	9	10	8	8	7	8	10	8
Dearborn	Total	51	11	5	2	1	4	6	8	17	10	11	4	15	7	14	8	19	19
	Males	27	4	2	1	1	2	6	5	9	4	5	.....	12	1	6	4	7	10
	Females	24	7	3	1	.....	2	.....	3	8	6	6	4	3	6	8	4	12	9
Decatur	Total	75	16	7	4	3	6	1	10	10	8	9	5	6	8	6	9	22	14
	Males	39	7	2	1	3	4	.....	.....	2	2	6	4	2	4	3	4	12	8
	Females	36	9	5	3	.....	2	1	10	8	6	3	1	4	4	3	5	10	6
Dekalb	Total	66	14	7	3	1	4	6	5	14	12	14	6	9	9	7	14	17	21
	Males	38	7	4	3	1	1	5	2	5	7	8	4	2	4	4	6	10	14
	Females	28	7	3	.....	.....	3	1	3	9	5	6	2	7	5	3	8	7	7

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Delaware	Total	177	26	9	7	12	25	10	28	32	37	29	31	31	25	21	26	28	41
	Males	92	14	5	4	4	13	4	10	16	19	11	18	15	14	14	17	17	22
	Females	85	12	4	3	8	12	6	18	16	18	18	13	16	11	7	9	11	19
Dubois	Total	54	26	8	2	4	5	10	13	14	12	9	3	11	12	9	12	10	14
	Males	31	11	1	.....	1	2	6	6	5	4	3	2	4	4	6	5	7	7
	Females	23	15	7	2	3	3	4	7	9	8	6	1	7	8	3	7	3	7
Elkhart	Total	75	11	6	9	3	19	6	22	25	25	20	21	16	15	37	31	39	33
	Males	46	1	2	5	3	12	2	11	8	9	10	8	7	5	24	15	18	19
	Females	29	10	4	4	.....	7	4	11	17	16	10	13	9	10	13	16	21	14
Fayette	Total	37	9	6	2	.....	6	5	5	10	5	6	4	7	10	9	14	6	11
	Males	19	6	2	2	.....	2	3	4	4	4	3	3	3	5	5	10	5	6
	Females	18	3	4	.....	.....	4	2	1	6	1	3	1	4	5	4	4	1	5
Floyd	Total	90	6	6	6	9	20	9	13	22	17	19	15	27	16	19	27	26	28
	Males	53	4	3	4	3	14	7	5	11	9	11	7	12	10	7	14	17	14
	Females	37	2	3	2	6	6	2	8	11	8	8	8	15	6	12	13	9	14
Fountain	Total	47	16	6	3	3	8	4	6	10	10	6	8	7	8	10	10	11	24
	Males	22	7	2	1	.....	5	3	2	5	6	4	4	4	5	5	7	6	15
	Females	25	9	4	2	3	3	1	4	5	4	2	4	3	3	5	3	5	9
Franklin	Total	49	3	3	.....	1	6	6	3	11	8	8	8	14	3	9	8	12	24
	Males	27	3	1	.....	.....	6	2	.....	3	5	3	5	6	3	4	5	2	17
	Females	22	.....	2	.....	1	.....	4	3	8	3	5	3	8	.....	5	3	10	7
Fulton	Total	34	7	1	.....	2	4	5	7	4	7	3	5	9	9	8	15	20	16
	Males	20	4	.....	.....	2	1	2	4	.....	3	1	3	3	6	5	8	8	9
	Females	14	3	1	.....	.....	3	3	3	4	4	2	2	6	3	3	7	12	7
Gibson	Total	107	22	7	8	3	14	17	18	17	12	18	14	9	10	15	23	15	12
	Males	58	12	3	3	2	8	9	6	11	5	8	9	5	3	9	13	4	7
	Females	49	10	4	5	1	6	8	12	6	7	10	5	4	7	6	10	11	5
Grant	Total	223	40	15	10	6	27	21	28	30	36	27	23	26	27	34	47	58	51
	Males	118	22	9	8	4	11	10	16	14	16	17	9	11	13	22	32	47	41
	Females	105	18	6	2	2	16	11	12	16	20	10	14	15	14	12	15	11	10
Greene	Total	102	23	9	8	4	7	9	24	20	14	19	8	16	9	17	15	16	23
	Males	62	12	4	4	1	4	6	7	8	4	10	3	7	4	8	3	10	13
	Females	40	11	5	4	3	3	3	17	12	10	9	5	9	5	9	12	6	10
Hamilton	Total	94	18	3	4	7	11	4	14	10	13	9	14	12	9	9	13	15	28
	Males	41	13	2	2	4	7	.....	3	3	2	5	5	5	6	7	8	11	14
	Females	53	5	1	2	3	4	4	11	7	11	4	9	7	3	2	5	4	14

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TABLE 4—Continued.

COUNTIES.	SEX.	UNDER 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
		0.	1.	2.	3.	4.													
Hancock	Total	59	17	4	1	2	4	9	8	8	12	11	8	9	15	12	11	13	23
	Males	30	10	2	.....	1	.....	5	3	3	8	4	2	3	7	7	5	7	13
	Females	29	7	2	1	1	4	4	5	5	4	7	6	6	8	5	6	6	10
Harrison	Total	42	10	5	4	1	7	7	9	11	8	22	9	7	6	8	13	14	17
	Males	24	5	2	2	1	4	1	5	5	4	9	5	5	.....	5	5	9	9
	Females	18	5	3	2	.....	3	6	4	6	4	13	4	2	6	3	8	5	8
Hendricks	Total	47	12	5	3	1	3	5	12	16	7	10	10	17	8	10	13	16	21
	Males	28	7	1	1	1	3	4	8	5	3	1	1	9	5	5	10	7	14
	Females	19	5	4	2	.....	.....	1	4	11	4	9	9	8	3	5	3	9	7
Henry	Total	78	7	6	2	1	7	5	13	21	13	21	7	14	11	10	21	19	35
	Males	39	4	2	1	.....	4	2	6	15	6	10	4	6	9	5	11	7	19
	Females	39	3	4	1	1	3	3	7	6	7	11	3	8	2	5	10	12	16
Howard	Total	76	18	3	1	.....	4	4	12	20	19	12	11	17	7	10	23	19	17
	Males	44	6	1	1	.....	1	1	3	12	6	5	7	7	1	2	11	14	9
	Females	32	12	2	.....	.....	3	3	9	8	13	7	4	10	6	8	12	5	8
Huntington	Total	89	16	5	1	.....	4	4	10	9	14	11	14	14	12	10	11	20	19
	Males	61	10	1	1	.....	2	2	2	4	8	6	5	6	6	6	3	9	9
	Females	28	6	4	.....	.....	2	2	8	5	6	5	9	8	6	4	8	11	10
Jackson	Total	113	24	11	2	2	12	7	18	17	21	11	14	10	14	15	10	19	15
	Males	59	14	3	.....	1	3	2	11	7	5	4	3	7	2	8	8	13	11
	Females	54	10	8	2	1	9	5	7	10	16	7	11	3	12	7	2	6	4
Jasper	Total	33	6	3	1	1	2	.....	6	3	4	4	3	3	4	4	2	9	7
	Males	23	2	.....	1	.....	1	.....	3	2	3	3	1	2	3	1	1	4	5
	Females	10	4	3	.....	1	1	.....	3	1	1	1	2	1	1	3	1	5	2
Jay	Total	104	17	5	5	2	6	8	11	17	13	7	15	8	11	10	14	16	25
	Males	62	11	3	3	1	1	7	1	10	6	2	4	3	5	7	8	14	20
	Females	42	6	2	2	1	5	1	10	7	7	5	11	5	6	3	6	2	5

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Jefferson	Total	55	19	3	4	4	7	6	12	18	17	16	11	13	5	11	13	23	22
	Males	29	6	1	1	1	5	2	3	6	12	10	5	6	4	6	6	14	11
	Females	26	13	2	3	3	2	4	9	12	5	6	6	7	1	5	7	9	11
Jennings	Total	43	2	2	.....	4	4	3	12	14	7	6	9	9	6	4	15	12	10
	Males	24	1	1	.....	2	2	2	7	5	4	2	4	1	3	2	6	5	4
	Females	19	1	1	.....	2	2	1	5	9	3	4	5	8	3	2	9	7	6
Johnson	Total	50	10	3	4	1	4	2	5	9	10	11	4	13	15	12	6	17	17
	Males	22	5	1	3	.....	3	2	1	2	3	1	2	3	7	6	4	8	8
	Females	28	5	2	1	1	1	.....	4	7	7	10	2	10	8	6	2	9	9
Knox	Total	137	27	10	6	2	14	7	16	21	18	19	16	14	17	20	20	16	34
	Males	75	14	3	3	1	7	5	11	11	8	10	4	7	8	10	13	11	22
	Females	62	13	7	3	1	7	2	5	10	10	9	12	7	9	10	7	5	12
Kosciusko	Total	67	17	7	3	.....	9	5	12	16	5	16	5	12	13	11	17	19	19
	Males	38	6	4	2	.....	4	3	8	6	3	5	1	6	6	3	5	11	9
	Females	29	11	3	1	.....	5	2	4	10	2	11	4	6	7	8	12	8	10
Lagrange	Total	34	4	2	2	.....	3	3	4	4	6	4	9	5	3	9	4	8	13
	Males	20	3	1															

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TABLE 4—Continued.

COUNTIES.	SEX.	UNDER 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
		0.	1.	2.	3.	4.													
Martin	Total	43	11	2	2	3	5	3	14	11	6	10	6	5	6	3	6	7	6
	Males	21	9	2	.....	1	3	2	8	5	3	4	1	2	1	2	2	6	1
	Females	22	2	.....	2	2	2	1	6	6	3	6	5	3	5	1	4	1	5
Miami	Total	79	6	6	2	2	11	5	8	16	20	12	14	10	16	24	21	21	17
	Males	46	4	2	1	1	5	2	3	8	11	4	7	7	9	15	11	11	8
	Females	33	2	4	1	1	6	3	5	8	9	8	7	3	7	9	10	10	9
Monroe	Total	69	20	6	4	3	8	3	9	20	13	10	5	15	9	10	8	7	11
	Males	44	9	2	2	2	5	3	6	9	6	3	3	4	5	6	4	2	7
	Females	25	11	4	2	1	3	.....	3	11	7	7	2	11	4	4	4	5	4
Montgomery	Total	66	11	2	1	1	9	11	12	13	19	19	14	13	13	16	21	19	26
	Males	44	7	1	.....	1	5	5	7	4	6	10	6	1	6	9	8	7	16
	Females	22	4	1	1	.....	4	6	5	9	13	9	8	12	7	7	13	12	10
Morgan	Total	43	7	3	.....	2	1	4	6	15	17	10	15	5	11	11	5	13	12
	Males	26	5	2	.....	1	1	3	3	6	5	4	6	3	5	4	.....	8	7
	Females	17	2	1	.....	1	.....	1	3	9	12	6	9	2	6	7	5	5	5
Newton	Total	28	5	1	1	.....	5	2	4	6	1	1	5	5	2	1	5	5	7
	Males	17	2	1	1	.....	3	1	2	2	1	.....	1	3	1	.....	1	3	4
	Females	11	3	.....	.....	.....	2	1	2	4	.....	1	4	2	1	1	4	2	3
Noble	Total	41	13	5	1	1	10	6	8	9	8	6	7	5	6	8	9	11	24
	Males	20	6	3	.....	1	5	5	4	5	6	3	5	2	4	4	4	4	17
	Females	21	7	2	1	.....	5	1	4	4	2	3	2	3	2	4	5	7	7
Ohio	Total	8	3	1	.....	.....	.....	.....	1	3	3	1	2	3	5	3	5	5	6
	Males	2	1	.....	.....	.....	.....	.....	.....	2	2	1	.....	2	4	1	5	2	1
	Females	6	2	1	.....	.....	.....	.....	1	1	1	.....	2	1	1	2	.....	3	5
Orange	Total	40	4	3	2	4	11	6	1	14	13	9	3	4	4	6	7	6	6
	Males	23	3	.....	.....	2	5	6	.....	2	4	3	1	2	.....	4	3	2	1
	Females	17	1	3	2	2	6	.....	1	12	9	6	2	2	4	2	4	4	5

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Owen	Total	16	6	7	2	1	4	9	9	9	11	4	9	11	5	3	9	10	15
	Males	10	3	4	1	1	.....	6	5	4	6	1	3	7	2	1	4	6	7
	Females	6	3	3	1	.....	4	3	4	5	5	3	6	4	3	2	5	4	8
Parke	Total	72	15	3	5	1	5	4	7	14	12	10	8	8	10	10	14	14	19
	Males	34	11	2	4	1	2	2	4	7	2	4	3	2	6	8	10	5	6
	Females	38	4	1	1	.....	3	2	3	7	10	6	5	6	4	2	4	9	13
Perry	Total	49	21	6	4	.....	3	4	12	9	12	12	4	9	10	8	6	14	19
	Males	30	11	4	4	.....	2	3	5	5	4	6	1	7	5	3	4	8	9
	Females	19	10	2	.....	.....	1	1	7	4	8	6	3	2	5	5	2	6	10
Pike	Total	86	29	15	6	7	16	6	15	24	14	13	14	3	7	16	15	12	17
	Males	43	17	6	1	4	10	3	7	8	8	1	8	.....	2	8	8	8	14
	Females	43	12	9	5	3	6	3	8	16	6	12	6	3	5	8	7	4	3
Porter	Total	53	4	4	1	1	6	8	11	8	11	6	11	8	8	4	9	12	13
	Males	28	4	1	.....	1	3	5	8	3	3	5	9	5	5	3	2	7	5
	Females	25	.....	3	1	.....	3	3	3	5	8	1	2	3	3	1	7	5	8
Posey	Total	72	26	8	12	4	10	7	23	17	17	16	10	11	18	11	13	10	16
	Males	34	11	4	8	3	7	2	10	7	6	9	6	4	12	7	9	4	7
	Females	38	15	4	4	1	3	5	13	10	11	7	4	7	6	4	4	6	9
Pulaski	Total	39	5	3	3	1	6	4	4	7	7	3	3	4	6	3	6	8	7
	Males	23	3	2	2	.....	4	4	.....	3	2	1	2	2	5	1	1	4	1
	Females	16	2	1	1	1	2	.....	4	4	5	2	1	2	1	2	5	4	6
Putnam	Total	62	8	11	2	2	1	9	10	15	7	11	5	6	8	14	14	5	18
	Males	35	4	6	2	.....	.....	6	3	7	2	5	1	1	3	4	8	3	9
	Females	27	4	5	.....	2	1	3	7	8	5	6	4	5	5	10	6	2	9
Randolph	Total	72	10	6	1	1	8	6	13	17	9	12	16	13	9	8	13	18	23
	Males	41	6	5	1	.....	3	1	7	7	5	3	8	5	4	4	8	12	14
	Females	31	4	1	.....	1	5	5	6	10	4	9	8	8	5	4	5	6	9
Ripley	Total	41	9	1	.....	.....	1	3	4	11	12	3	3	4	7	9	13	8	18
	Males	29	7	.....	.....	.....	1	1	2	3	6	2	1	3	1	3	6	4	8
	Females	12	2	1	.....	.....	.....	2	2	8	6	1	2	1	6	6	7	4	10
Rush	Total	37	6	5	3	1	8	5	6	10	12	6	8	10	4	11	21	12	13
	Males	20	2	3	1	1	3	3	3	1	5	3	3	7	2	5	15	8	5
	Females	17	4	2	2	.....	5	2	3	9	7	3	5	3	2	6	6	4	8
Scott	Total	19	5	4	.....	1	5	4	9	5	6	8	2	1	1	7	3	5	5
	Males	8	4	1	.....	1	1	.....	6	1	1	2	1	1	.....	4	3	2	3
	Females	11	1	3	.....	.....	4	4	3	4	5	6	1	.....	1	3	.....	3	2

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TABLE 4—Continued.

COUNTIES.	SEX.	UNDER 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
		0.	1.	2.	3.	4.													
Shelby	Total	87	17	6	5	3	12	10	10	18	15	8	13	16	10	14	21	19	22
	Males	55	11	3	5	1	6	4	4	9	5	4	6	6	7	10	8	10	14
	Females	32	6	3	.....	2	6	6	6	9	10	4	7	10	3	4	13	9	8
Spencer	Total	78	13	5	2	6	9	7	15	15	17	4	13	13	13	11	8	14	24
	Males	44	3	2	.....	3	3	4	4	7	8	2	3	6	7	7	1	8	16
	Females	34	10	3	2	3	6	3	11	8	9	2	10	7	6	4	7	6	8
Starke	Total	34	5	4	2	1	2	2	2	3	9	2	4	8	3	4	5	4	10
	Males	24	4	1	2	.....	1	2	.....	2	4	1	1	5	2	3	2	3	7
	Females	10	1	3	.....	1	1	.....	2	1	5	1	3	3	1	1	3	1	3
Steuben	Total	22	4	4	.....	.....	4	5	4	7	4	4	7	5	6	7	9	8	14
	Males	18	1	2	.....	.....	.....	2	3	2	1	2	3	1	4	2	3	5	10
	Females	4	3	2	.....	.....	4	3	1	5	3	2	4	4	2	5	6	3	4
St. Joseph	Total	231	32	29	6	10	13	14	24	34	32	25	25	37	26	31	28	37	38
	Males	130	14	13	5	5	5	10	13	18	15	14	9	25	19	10	14	23	18
	Females	101	18	16	1	5	8	4	11	16	17	11	16	12	7	21	14	14	20
Sullivan	Total	106	22	4	7	3	5	7	7	29	6	8	10	14	8	15	12	16	15
	Males	51	11	2	2	2	3	5	4	12	3	6	3	5	5	9	6	4	10
	Females	55	11	2	5	1	2	2	3	17	3	2	7	9	3	6	6	12	5
Switzerland	Total	34	7	4	1	3	4	1	4	6	7	6	2	7	5	6	11	10	9
	Males	20	4	2	1	2	2	1	.....	1	5	2	2	2	.....	3	6	4	4
	Females	14	3	2	.....	1	2	.....	4	5	2	4	.....	5	5	3	5	6	5
Tippecanoe	Total	83	7	6	1	2	10	8	19	26	20	16	15	24	16	20	26	43	49
	Males	48	4	2	.....	1	5	4	7	18	12	7	7	17	9	6	17	23	31
	Females	35	3	4	1	1	5	4	12	8	8	9	8	7	7	14	9	20	18
Tipton	Total	64	10	4	.....	3	6	6	7	7	4	7	3	9	8	10	7	7	8
	Males	40	7	4	.....	1	4	4	2	1	.....	1	2	4	5	7	2	4	5
	Females	24	3	.....	.....	2	2	2	5	6	4	6	1	5	3	3	5	3	3

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Union	Total	16	2	1	.....	.....	2	1	2	7	6	6	1	4	3	.....	2	9	
	Males	5	2	1	.....	.....	1	.....	.....	4	3	3	1	2	2	.....	.....	2	
	Females	11	.....	.....	.....	.....	1	1	2	3	3	3	.....	2	1	.....	2	7	
Vanderburgh	Total	220	39	14	9	2	17	14	33	41	48	46	52	51	54	51	53	44	5
	Males	119	25	6	3	1	7	10	16	17	21	21	26	28	26	29	27	29	2
	Females	101	14	8	6	1	10	4	17	24	27	25	26	23	28	22	26	15	3
Vermillion	Total	67	16	5	2	2	3	4	6	9	8	10	9	4	8	11	9	10	
	Males	45	9	3	1	1	2	3	3	6	3	5	5	3	7	8	5	5	
	Females	22	7	2	1	1	1	1	3	3	5	5	4	1	1	3	4	5	
Vigo	Total	261	61	21	7	5	29	26	34	50	29	38	47	43	34	41	38	50	5
	Males	142	31	11	5	2	20	11	20	21	18	20	28	25	19	23	20	22	3
	Females	119	30	10	2	3	9	15	14	29	11	18	19	18	15	18	18	28	2
Wabash	Total	76	7	2	5	3	7	13	15	16	13	8	11	15	14	11	10	13	2
	Males	44	4	1	3	2	1	6	3	6	6	3	7	8	3	4	4	8	1
	Females	32	3	1	2	1	6	7	12	10	7	5	4	7	11	7	6	5	
Warren	Total	17	5	3	1	2	1	2	4	2	2	4	4	7	3	4	3	5	
	Males	8	2	2	.....	.....	1	1	2	1	.....	2	3	5	2	2	.....	4	
	Females	9	3	1	1	2	.....	1	2	1	2	2	1	2	1	2	3	1	
Warrick	Total	76	19	7	4	2	13	5	7	17	15	10	8	11	14	6	14	13	1
	Males	41	12	6	3	1	7	3	3	6	4	3	3	1	12	5	4	7	1
	Females	35	7	1	1	1	6	2	4	11	11	7	5	10	2	1	10	6	
Washington	Total	58	7	3	3	3	5	6	17	9	12	9	5	11	8	12	5	7	1
	Males	27	5	2	1	.....	4	2	8	2	6	2	3	7	5	7	2	6	1
	Females	31	2	1	2	3	1	4	9	7	6	7	2	4	3	5	3	1	
Wayne	Total	86	16	12	7	5	27	17	26	27	37	19	28	24	30	34	36	39	4
	Males	43	6	4	3	1	13	9	15	9	20	11	15	11	17	16	23	16	3
	Females	43	10	8	4	4	14	8	11	18	17	8	13	13	13	18	13	23	1
Wells	Total	63	11	3	6	1	7	2	10	13	10	10	10	4	6	10	9	11	1
	Males	35	6	2	2	.....	1	1	5	5	4	3	1	3	3	4	4	4	
	Females	28	5	1	4	1	6	1	5	8	6	7	9	1	3	6	5	7	
White	Total	56	12	3	.....	4	6	5	8	5	6	4	3	9	8	4	11	7	1
	Males	34	8	.....	.....	1	1	1	6	1	3	1	2	3	5	2	5	3	
	Females	22	4	3	.....	3	5	4	2	4	3	3	1	6	3	2	6	4	

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TABLE 4—Continued.

COUNTIES.	SEX.	UNDER 5.					5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.
		0.	1.	2.	3.	4.													
Whitley	Total	37	2	1	1	1	4	5	5	6	6	6	6	7	10	4	8	11	12
	Males	19	1	1	.....	.....	2	3	3	4	3	1	1	5	4	2	3	7	5
	Females	18	1	.....	1	1	2	2	2	2	3	5	5	2	6	2	5	4	7
Total males		4,218	765	293	178	130	433	355	535	701	651	581	563	628	609	690	757	913	1,139
Total females		3 403	645	321	159	140	396	325	650	876	778	703	630	649	565	611	680	761	884
Grand total		7,621	1,410	614	337	270	829	680	1,185	1,577	1,429	1,284	1,193	1,277	1,174	1,301	1,437	1,674	2,023

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TABLE 4—Continued.

Deaths in Indiana, by Months, Counties, Ages, Sex, Color, Nationality and Conjugal Condition.

COUNTIES.	Sex.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Adams	Total	15	21	21	4	.....	247	.....	208	39	.....	106	92	49	.....	247
	Males	6	11	10	1	.....	108	.....	87	21	.....	51	45	12	.....	108
	Females	9	10	11	3	.....	139	.....	121	18	.....	55	47	37	.....	139
Allen	Total	55	54	57	6		939	7	733	212	1	454			1	

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TABLE 4—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Cass	Total	29	28	28	5	2	469	5	402	45	27	203	167	85	19	474
	Males	16	18	15	2	1	249	5	211	26	17	122	85	32	15	254
	Females	13	10	13	3	1	220	.....	191	19	10	81	82	53	4	220
Clark	Total	24	28	27	4	5	399	86	435	31	19	260	140	81	4	485
	Males	11	13	13	2	2	200	53	217	19	17	142	86	22	3	253
	Females	13	15	14	2	3	199	33	218	12	2	118	54	59	1	232
Clay	Total	23	18	14	1	4	414	12	384	37	5	253	130	40	3	426
	Males	11	8	10	.....	2	204	5	183	22	4	131	62	13	3	209
	Females	12	10	4	1	2	210	7	201	15	1	122	68	27	.....	217
Clinton	Total	29	30	24	4	2	395	2	389	6	2	194	143	60	.....	397
	Males	19	12	17	1	1	199	1	193	6	1	97	85	18	.....	200
	Females	10	18	7	3	1	196	1	196	.....	1	97	58	42	.....	197
Crawford	Total	13	12	8	2	1	164	.....	159	4	1	73	65	25	1	164
	Males	6	8	7	1	1	101	.....	97	4	.....	46	46	8	1	101
	Females	7	4	1	1	.....	63	.....	62	.....	1	27	19	17	.....	63
Daviess	Total	22	21	25	2	.....	408	8	387	28	3	208	137	62	9	416
	Males	13	10	14	1	.....	202	3	186	18	1	112	68	24	1	205
	Females	9	11	11	1	.....	206	5	201	8	2	96	69	38	8	211
Dearborn	Total	28	24	28	3	4	296	3	248	47	4	124	100	70	5	299
	Males	17	10	14	.....	3	149	1	122	25	3	71	54	22	3	150
	Females	11	14	14	3	1	147	2	126	22	1	53	46	48	2	149
Decatur	Total	21	26	23	5	1	292	3	277	18	.....	144	91	59	1	295
	Males	8	10	12	.....	1	133	1	126	8	.....	71	42	20	1	134
	Females	13	16	11	5	.....	159	2	151	10	.....	73	49	39	.....	161
Dekalb	Total	20	36	23	1	.....	309	.....	288	21	.....	133	116	59	1	309
	Males	9	23	17	1	.....	175	.....	163	12	.....	82	68	24	1	175
	Females	11	13	6	.....	.....	134	.....	125	9	.....	51	48	35	.....	134

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Delaware	Total	32	22	44	7	4	687	17	672	25	7	337	245	113	9	704
	Males	17	18	25	4	3	364	12	354	15	7	182	133	56	5	376
	Females	15	4	19	3	1	323	5	318	10	.....	155	112	57	4	328
Dubois	Total	18	8	14	1	3	271	1	224	46	2	151	79	40	2	272
	Males	9	3	7	.....	2	125	1	105	21	.....	72	39	14	1	126
	Females	9	5	7	1	1	146	.....	119	25	2	79	40	26	1	146
Elkhart	Total	43	41	43	1	1	542	.....	490	46	6	190	230	116	6	542
	Males	20	26	23	1	1	276	.....	246	25	5	97	132	42	5	276
	Females	23	15	20	.....	.....	266	.....	244	21	1	93	98	74	1	266
Fayette	Total	12	12	10	1	1	186	2	183	3	2	88	53	36	11	188
	Males	6	5	2	1	1	101	.....	98	1	2	50	28	17	6	101
	Females	6	7	8	.....	.....	85	2	85	2	.....	38	25	19	5	87
Floyd	Total	28	18	28	3	7	404	55	404	52	3	198	162	96	3	459
	Males	14	9	13	2	3	213	33	219	24	3	118	90	35	3	246
	Females	14	9	15	1	4	191	22	185	28	.....	80	72	61	.....	213

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TABLE 4—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Hancock	Total	23	12	18	5	2	286	.....	277	8	1	130	109	47	.....	286
	Males	10	8	11	2	1	142	.....	137	4	1	70	51	21	.....	142
	Females	13	4	7	3	1	144	.....	140	4	.....	60	58	26	.....	144
Harrison	Total	13	23	12	6	3	250	7	242	15	.....	109	99	46	3	257
	Males	7	14	3	2	2	122	6	117	11	.....	57	53	16	2	128
	Females	6	9	9	4	1	128	1	125	4	.....	52	46	30	1	129
Hendricks	Total	20	15	24	4	.....	275	4	273	5	1	116	109	51	3	279
	Males	12	9	10	3	.....	146	1	144	2	1	65	61	20	1	147
	Females	8	6	14	1	.....	129	3	129	3	.....	51	48	31	2	132
Henry	Total	36	38	27	5	.....	389	8	387	8	2	149	165	80	3	397
	Males	19	19	16	3	.....	202	5	201	5	1	79	96	30	2	207
	Females	17	19	11	2	.....	187	3	186	3	1	70	69	50	1	190
Howard	Total	22	22	23	5	.....	337	8	332	12	1	149	124	70	2	345
	Males	11	11	10	2	.....	159	6	156	8	1	75	65	23	2	165
	Females	11	11	13	3	.....	178	2	176	4	.....	74	59	47	.....	180
Huntington	Total	18	31	25	4	4	342	3	311	33	1	155	130	52	8	345
	Males	11	15	14	1	4	184	2	172	13	1	94	69	17	6	186
	Females	7	16	11	3	.....	158	1	139	20	.....	61	61	35	2	159
Jackson	Total	20	25	22	2	.....	394	10	380	23	1	218	128	57	1	404
	Males	12	17	14	1	.....	201	4	188	16	1	108	68	28	1	205
	Females	8	8	8	1	.....	193	6	192	7	.....	110	60	29	.....	199
Jasper	Total	8	5	6	1	.....	115	.....	96	17	2	63	37	14	1	115
	Males	4	3	2	1	.....	65	.....	57	7	1	38	20	6	1	65
	Females	4	2	4	.....	.....	50	.....	39	10	1	25	17	8	.....	50
Jay	Total	14	18	20	6	1	350	3	345	6	2	174	131	45	3	353
	Males	5	7	13	2	.....	193	2	190	3	2	104	69	19	3	195
	Females	9	11	7	4	1	157	1	155	3	.....	70	62	26	.....	158

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Jefferson	Total	29	19	34	10	3	334	20	319	35	.....	158	109	85	2	354
	Males	14	9	19	4	2	167	9	159	17	.....	73	66	36	1	176
	Females	15	10	15	6	1	167	11	160	18	.....	85	43	49	1	178
Jennings	Total	15	11	15	1	2	201	5	195	10	1	93	81	32	.....	206
	Males	11	5	7	1	.....	96	3	92	6	1	50	38	11	.....	99
	Females	4	6	8	.....	2	105	2	103	4	.....	43	43	21	.....	107
Johnson	Total	19	13	12	3	3	235	8	240	2	1	96	105	41	1	243
	Males	10	5	7	1	2	104	2	105	.....	1	48	45	12	1	106
	Females	9	8	5	2	1	131	6	135	2	.....	48	60	29	.....	137
Knox	Total	25	15	19	2	1	465	11	440	34	2	257	156	61	2	476
	Males	13	6	9	2	1	250	4	231	23	.....	149	79	25	1	254
	Females	12	9	10	.....	.....	215	7	209	11	2	108	77	36	1	222
Kosciusko	Total	32	24	27	4	1	340	1	332	6	3	154	127	60	.....	341
	Males	22	7	11	2	.....	162	.....	157	3	2	85	57	20	.....	162
	Females	10	17	16	2	1	178	1	175	3	1	69	70	40	.....	179
Lagrange	Total	19	22	17	4	1	180	.....	168	11	1	63	68	49	.....	180
	Males	9	10	7	3	.....	85	.....	78	6	1	38	28	19	.....	85
	Females	10	12	10	1	1	95	.....	90	5	.....	25	40	30	.....	95
Lake	Total	30	16	14	3	4	556	2	425	122	11	301	194	49	14	558
	Males	20	5	9	2	2	325	2	240	77	10	184	108	21	14	327
	Females	10	11	5	1	2	231	.....	185	45	1	117	86	28	.....	231
Laporte	Total	36	39	32	8	1	491	11	374	114	14	244	163	85	10	502
	Males	17	19	19	3	1	261	11	193	68	11	141	93	28	10	272
	Females	19	20	13	5	.....	230	.....	181	46	3	103	70	57	.....	230
Lawrence	Total	14	17	20	1	1	318	2	307	9	4	162	100	57	1	320
	Males	10	7	8	.....	1	173	2	168	6	1	105	49	20	1	175
	Females	4	10	12	1	.....	145	.....	139	3	3	57	51	37	.....	145
Madison	Total	34	42	34	5	11	982	28	953	50	7	558	313	133	6	1,010
	Males	17	22	16	3	8	524	15	500	34	5	324	163	50	2	539
	Females	17	20	18	2	3	458	13	453	16	2	234	150	83	4	471
Marion	Total	178	135	133	33	18	2,831	392	2,768	391	64	1,447	1,117	612	47	3,223
	Males	98	66	73	17	11	1,481	181	1,406	220	36	810	604	217	31	1,662
	Females	80	69	60	16	7	1,350	211	1,362	171	28	637	513	395	16	1,561
Marshall	Total	24	21	24	1	.....	290	.....	264	25	1	133	113	43	1	290
	Males	13	13	18	.....	.....	153	.....	141	11	1	68	67	17	1	153
	Females	11	8	6	1	.....	137	.....	123	14	.....	65	46	26	.....	137

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TABLE 4—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Martin	Total	9	5	6	1	2	171	1	166	3	3	93	53	25	1	172
	Males	6	3	4	.....	2	87	1	83	2	3	53	23	11	1	88
	Females	3	2	2	1	....	84	.....	83	1	.....	40	30	14	.....	84
Miami	Total	21	31	27	3	2	369	5	333	32	9	163	139	70	2	374
	Males	6	16	17	1	1	194	2	170	21	5	96	74	24	2	196
	Females	15	15	10	2	1	175	3	163	11	4	67	65	46	.....	178
Monroe	Total	20	20	21	3	1	285	10	278	6	11	152	101	38	4	295
	Males	10	9	11	1	1	146	8	143	4	7	90	49	14	1	154
	Females	10	11	10	2	.....	139	2	135	2	4	62	52	24	3	141
Montgomery	Total	43	25	38	3	.....	390	5	379	14	2	149	158	88	.....	395
	Males	23	11	16	1	.....	190	4	188	5	1	93	73	28	.....	194
	Females	20	14	22	2	.....	200	1	191	9	1	56	85	60	.....	201
Morgan	Total	14	11	13	2	.....	219	1	210	5	5	94	86	39	1	220
	Males	8	6	9	1	.....	113	.. ...	106	5	2	58	37	18	.....	113
	Females	6	5	4	1	.....	106	1	104	.....	3	36	49	21	1	107
Newton	Total	8	5	9	2	3	111	.....	94	13	4	55	41	15	.....	111
	Males	7	3	5	2	2	62	.....	53	6	3	35	23	4	.....	62
	Females	1	2	4	.....	1	49	.....	41	7	1	20	18	11	.....	49
Noble	Total	20	16	31	4	5	254	.....	230	20	4	105	98	48	3	254
	Males	6	9	21	3	3	140	.....	126	12	2	55	60	22	3	140
	Females	14	7	10	1	2	114	.....	104	8	2	50	38	26	.....	114
Ohio	Total	4	7	3	.....	.....	54	9	61	2	.....	25	25	13	.....	63
	Males	2	3	2	.....	.....	27	3	30	.....	.....	11	14	5	.....	30
	Females	2	4	1	.....	.....	27	6	31	2	.....	14	11	8	.....	33
Orange	Total	14	7	16	2	7	187	2	183	3	3	93	60	34	2	189
	Males	4	2	7	.....	4	76	2	74	2	2	48	19	9	2	78
	Females	10	5	9	2	3	111	.....	109	1	1	45	41	25	.....	111

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TABLE 4—Continued.

COUNTIES.	SEX.	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Midowed.	Not Reported.	Total.
Shelby	Total	19	22	20	1	.....	363	5	349	17	2	176	141	49	2	368
	Males	12	13	12	.....	.....	202	3	194	10	1	108	78	17	2	205
	Females	7	9	8	1	.....	161	2	155	7	1	68	63	32	.....	163
Spencer	Total	21	12	14	4	7	289	36	288	29	8	167	107	46	5	325
	Males	12	8	5	3	4	144	16	138	17	5	86	59	14	1	160
	Females	9	4	9	1	3	145	20	150	12	3	81	48	32	4	165
Starke	Total	11	6	3	3	1	128	.....	105	22	1	56	52	18	2	128
	Males	6	4	1	1	.....	76	.....	66	9	1	39	29	6	2	76
	Females	5	2	2	2	1	52	.....	39	13	.....	17	23	12	.....	52
Steuben	Total	22	11	16	3	2	168	.....	159	4	5	56	71	41	.....	168
	Males	11	5	11	...	1	87	.....	80	4	3	31	40	16	.....	87
	Females	11	6	5	3	1	81	.....	79	.....	2	25	31	25	.....	81
St. Joseph	Total	35	43	36	6	2	772	22	651	128	15	416	251	116	11	794
	Males	21	25	17	2	1	414	12	352	61	13	234	133	50	9	426
	Females	14	18	19	4	1	358	10	299	67	2	182	118	66	2	368
Sullivan	Total	18	19	18	5	7	357	4	347	10	4	187	115	55	4	361
	Males	10	8	7	3	3	172	2	166	5	4	97	56	17	4	174
	Females	8	11	11	2	4	185	2	182	5	.....	90	59	38	.....	187
Switzerland	Total	8	19	6	1	1	160	2	152	9	1	70	64	27	1	162
	Males	3	7	3	.....	1	74	1	68	6	1	41	26	7	1	75
	Females	5	12	3	1	.....	86	1	84	3	.....	29	38	20	.....	87
Tippecanoe	Total	57	33	36	8	9	525	9	433	82	19	193	203	128	10	534
	Males	28	18	18	4	5	283	8	227	54	10	104	125	54	8	291
	Females	29	15	18	4	4	242	1	206	28	9	89	78	74	2	243
Tipton	Total	15	24	22	1	.....	232	.....	222	8	2	116	78	37	1	232
	Males	10	15	13	1	.....	132	.....	123	7	2	72	41	18	1	132
	Females	5	9	9	.....	.....	100	.....	99	1	.....	44	37	19	.....	100

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TABLE 4—Continued.

COUNTIES.	SEX	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Whitley	Total	13	26	21	2	1	192	3	177	13	5	69	77	48	1	195
	Males	5	14	14	1	1	97	2	86	10	3	35	42	21	1	99
	Females	8	12	7	1	.....	95	1	91	3	2	34	35	27	.....	96
Total males		1,146	1,067	1,087	152	118	17,061	648	15,742	1,691	276	8,906	6,378	2,195	230	17,709
Total females		1,006	951	960	175	92	15 761	599	14,994	1,214	152	7,079	5,502	3,698	81	16,360
Grand total		2,152	2,018	2,047	327	210	32,822	1,247	30,736	2,905	428	15,985	11,880	5,893	311	34,069

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TABLE 4—Continued.

COUNTIES.	SEX	70 to 75.	75 to 80.	80 to 90.	90 and Over.	Unknown.	White.	Colored.	American.	Foreign.	Not Reported.	Single.	Married.	Widowed.	Not Reported.	Total.
Whitley	Total	13	26	21	2	1	192	3	177	13	5	69	77	48	1	195
	Males	5	14	14	1	1	97	2	86	10	3	35	42	21	1	99
	Females	8	12	7	1	.....	95	1	91	3	2	34	35	27	....	96
Total males		1,146	1,067	1,087	152	118	17,061	648	15,742	1,691	276	8,906	6,378	2,195	230	17,709
Total females		1,006	951	960	175	92	15 761	599	14,994	1,214	152	7,079	5,502	3,698	81	16,360
Grand total		2,152	2,018	2,047	327	210	32,822	1,247	30,736	2,905	428	15,985	11,880	5,893	311	34,069

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TABLE A—Continued.

COUNTIES.	1902.												Sex.			Color.				Nationality.				Not Reported.	
																White.		Color'd.		American.		Foreign.			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Males.	Females.	Fathers.	Mothers.	Fathers.	Mothers.	Fathers.	Mothers.
Fayette	17	20	19	24	19	9	18	15	12	11	19	19	106	106	212	103	101	3	5	202	199	6	6	....	3
Floyd	43	17	18	11	21	26	31	22	20	32	30	18	142	147	289	138	142	4	5	263	276	13	6	10	4
Fountain	38	22	16	31	29	26	40	26	8	31	20	18	151	154	305	151	154	....	....	300	302	4	2	....	....
Franklin	14	23	22	14	21	13	10	11	17	14	20	13	106	86	192	93	78	13	8	183	185	3	2	4	3
Fulton	29	24	23	7	15	9	27	19	17	26	24	15	115	120	235	115	120	....	....	227	227	....	....	2	2
Gibson	43	58	59	33	33	48	70	59	35	64	42	55	303	296	599	293	286	10	10	546	548	5	5	45	43
Grant	46	57	73	75	67	73	82	64	73	45	30	9	365	329	694	364	328	1	1	654	641	38	20	....	31
Greene	67	43	49	45	43	50	49	40	36	18	51	26	281	236	517	281	236	....	....	472	486	14	7	23	16
Hamilton	79	44	49	42	30	35	52	52	36	79	50	26	290	284	574	285	283	5	1	563	563	6	6	....	....
Hancock	40	31	30	31	35	27	30	36	25	37	32	21	202	173	375	202	171	....	2	363	366	7	4	....	....
Harrison	33	34	25	24	13	22	40	24	22	36	22	25	168	152	320	168	151	....	1	317	318	1	....	....	....
Hendricks	29	28	33	13	36	41	31	26	13	34	25	15	176	148	324	175	147	1	1	316	315	1	2	5	5
Henry	36	31	48	31	45	30	73	34	58	63	42	48	277	262	539	272	253	5	9	509	520	14	10	9	2
Howard	57	45	69	40	52	53	28	61	25	42	31	36	253	286	539	253	285	....	1	514	519	3	1	21	18
Huntington	41	38	49	46	40	41	57	48	40	44	41	47	288	244	532	288	244	....	....	526	523	3	6	....	....
Jackson	51	52	50	43	48	45	44	43	51	64	47	29	292	275	567	289	275	3	....	540	549	8	9	12	2
Jasper	29	13	17	18	21	14	30	25	26	33	18	27	137	134	271	137	134	....	....	219	226	17	12	33	31
Jay	43	49	45	50	42	36	61	66	48	45	51	40	289	287	576	289	287	....	....	557	561	8	3	1	2
Jefferson	24	18	23	18	15	17	21	20	16	40	17	26	131	124	255	129	119	2	5	238	250	6	2	8	....
Jennings	27	27	31	17	22	22	23	33	28	15	18	17	158	122	280	154	120	4	2	272	275	....	1	4	....
Johnson	13	16	29	26	17	14	22	30	16	18	21	13	121	114	235	121	113	....	1	223	224	....	....	8	7
Knox	90	76	72	81	68	50	52	74	76	68	51	102	461	399	860	451	394	10	5	824	827	14	16	14	9
Kosciusko	52	54	51	41	40	37	42	34	34	49	35	37	260	246	506	260	246	....	....	503	503	....	....	....	....
Lagrange	23	24	23	30	28	40	18	28	34	32	20	24	174	150	324	174	150	....	....	275	279	6	2	35	35
Lake	24	30	34	46	37	40	36	40	39	39	42	30	230	207	437	230	207	....	....	360	380	77	57	....	....

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Laporte	61	76	54	48	56	64	75	78	60	67	64	65	387	381	768	386	381	1	....	541	589	212	169	9	4
Lawrence	49	41	49	31	40	41	59	64	53	50	49	52	311	267	578	311	267	....	....	432	432	....	....	138	138
Madison	170	170	163	142	152	128	171	214	142	115	143	121	964	867	1,831	959	861	5	6	1,704	1,702	101	106	4	1
Marion	335	295	320	274	288	318	368	366	333	338	305	322	1,990	1,872	3,862	1,846	1,704	144	168	3,199	3,371	456	386	159	57
Marshall	39	45	49	43	33	30	53	38	40	37	36	30	227	246	473	227	246	...	....	450	450	13	12	3	4
Martin	35	33	23	26	26	7	21	41	28	12	15	15	148	134	282	148	134	....	....	240	255	42	27	....	....
Miami	34	30	24	45	24	36	22	34	21	20	28	23	173	168	341	170	165	3	3	271	283	26	23	41	32
Monroe	21	36	12	24	13	12	20	24	30	38	22	17	148	121	269	146	120	2	1	264	250	2	....	1	17
Montgomery	42	48	50	53	34	33	60	59	42	61	37	29	306	242	548	304	237	2	5	525	535	4	2	11	3
Morgan	45	48	26	20	18	22	28	16	18	22	26	24	153	160	313	152	159	1	1	309	311	....	....	2	....
Newton	14	13	14	28	19	18	27	25	13	21	17	13	119	103	222	119	103	....	....	196	209	17	10	9	3
Noble	27	33	29	21	18	30	35	35	34	22	30	27	193	148	341	193	148	....	....	327	327	9	4	4	9
Ohio	5	4	6	5	3	3	3	7	9	8	8	4	36	29	65	35	29	1	....	65	65	....	....	....	....
Orange	32	17	17	23	18	24	26	15	19	29	21	16	142	115	257	142	115	..	....	256	256	....	....	1	1
Owen	17	17	32	13	20	17	24	24	26	21	17	26	134	115	254	138	115	1	....	252	252	....	....	....	....
Parke	49	31	19	30	30	21	12	21	10	15	11	14	138	125	263	137	124	1	1	248	246	12	15	1	....
Perry	33	27	25	29	24	25	19	25	22	31	40	43	165	178	343	162	173	3	5	325	333	15	7	....	....
Pike	25	26	26	25	20	18	27	31	26	38	43	25	183	147	330	183	147	....	....	276	275	....	....	52	53
Porter	32	12	15	21	18	14	27	23	31	12	9	18	111	121	232	111	121	....	....	181	194	48	35	....	....
Posey	51	59	24	41	31	39	27	41	36	45	41	31	228	238	466	221	233	7	5	447	457	9	3	5	1
Pulaski	5	15	10	10	9	11	14	16	6	21	16	4	77	60	137	77	60	....	....	126	129	3	3	8	5
Putnam	35	29	35	46	34	37	38	43	43	37	29	42	235	213	448	233	209	2	4	422	440	8	1	12	1
Randolph	52	27	52	38	29	54	70	59	25	51	39	42	277	261	538	276	259	1	2	529	531	....	1	3	....
Ripley	30	21	11	45	19	22	17	14	22	59	17	6	154	129	283	154	129	....	....	49	52	3	1	228	227
Rush	29	31	36	28	22	16	29	19	15	22	21	37	149	156	305	145	152	4	4	302	304	....	....	2	....
Scott	19	13	10	10	15	8	9	7	8	19	16	13	79	68	147	79	68	....	....	144	144	1	1	....	....
Shelby	44	44	33	43	29	42	52	46	41	67	36	37	267	247	514	266	246	1	1	492	502	9	4	6	1
Spencer	11	25	23	20	17	21	26	16	17	23	19	12	133	97	230	126	95	7	2	218	220	3	4	6	3
Starke	18	12	17	8	15	11	15	17	16	11	16	21	95	82	177	95	82	....	....	140	146	36	30	....	....
Steuben	21	15	14	10	9	8	14	14	5	26	13	7	90	66	156	90	66	....	....	145	153	2	....	7	1
St. Joseph	87	73	72	67	59	61	103	60	51	127	67	80	437	470	907	436	467	1	3	580	593	317	302	....	2
Sullivan	39	56	25	32	35	39	25	28	35	35	40	32	215	206	421	215	206	....	....	417	417	4	4	....	....
Switzerland	22	9	12	22	15	10	16	20	15	11	9	9	86	84	170	86	84	....	....	165	165	....	....	....	....
Tippecanoe	45	48	31	36	41	40	36	49	27	31	20	18	210	212	422	209	210	1	2	336	361	50	36	26	15
Tipton	24	17	40	24	15	32	24	25	38	46	24	18	156	171	327	156	171	....	....	317	320	3	....	2	2
Union	4	8	13	2	10	8	8	14	9	8	11	6	57	44	101	57	44	....	....	101	101	....	....	....	....
Vanderburgh	125	95	64	126	57	90	112	128	90	92	109	100	642	546	1,188	596	512	46	34	1,028	1,092	118	63	34	25
Vermillion	27	36	23	20	20	24	25	35	23	30	27	27	156	161	317	156	161	....	....	282	287	20	16	10	9
Vigo	112	104	141	71	74	76	114	98	99	105	87	88	590	579	1,169	573	562	17	17	1,072	1,090	82	69	12	7

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TABLE A—Continued.

COUNTIES.	1902.												Sex.			Color.				Nationality.				Not Reported.	
																White.		Color'd.		American.		Foreign.			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Males.	Females.	Fathers.	Mothers.	Fathers.	Mothers.	Fathers.	Mothers.
Wabash	28	25	19	21	27	30	8	5	8	38	42	17	135	133	268	134	133	1	....	264	264	....	....	....	....
Warren	24	13	11	8	11	5	11	10	16	11	5	7	70	62	132	70	62	....	....	129	128	1	2	....	....
Warrick	28	31	23	23	21	20	16	18	19	30	32	28	142	147	289	138	143	4	4	156	174	37	20	94	93
Washington	22	25	16	17	19	23	15	24	23	26	15	18	121	122	243	121	122	....	....	241	241	....	....	....	....
Wayne	62	45	45	61	42	53	67	52	55	53	43	58	353	283	636	339	270	14	13	599	614	26	14	5	2
Wells	50	30	36	20	20	45	41	41	17	35	34	31	211	189	400	211	189	....	....	377	388	8	3	6	....
White	41	37	42	46	34	20	59	46	34	57	26	26	247	221	468	247	221	....	....	97	101	....	....	365	361
Whitley	25	17	28	18	17	10	20	20	36	21	24	27	124	139	263	124	139	....	....	254	256	7	5	1	1
Totals	4,049	3,766	3,652	3,441	3,204	3,233	3,979	3,912	3,408	4,061	3,314	3,243	22,393	20,869	43,262	22,015	20,498	378	371	38,351	39,206	2,555	1,968	1,903	1,635

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TABLE B.

Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births, Year Ending December 31, 1902.

COUNTIES.	Total.	Number of Children Born to Each Mother.												
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.
Adams	495	114	92	78	62	38	31	35	11	14	4	.....	6	10
Allen	1,273	356	252	178	148	103	71	61	36	19	17	5	9	18
Bartholomew	549	162	105	82	54	42	35	15	19	16	5	1	3	10
Benton	299	99	65	33	30	23	16	6	8	9	1	2	1	6
Blackford	475	128	97	78	48	35	26	26	20	7	6	1	1	2
Boone	446	130	78	61	63	38	24	17	12	6	4	2	3	8
Brown	212	44	41	25	26	27	12	9	9	6	3	3	5	2
Carroll	248	58	46	35	35	30	13	10	7	3	3	2	2	4
Cass	388	131	86	51	31	28	18	13	5	4	1	2	1	17
Clark	528	157	98	83	60	57	25	17	17	7	3	1	1	2
Clay	767	192	145	117	86	72	48	39	22	12	7	7	12	8
Clinton	434	136	98	66	42	36	21	11	10	8	2	2	2	.....
Crawford	249	62	49	50	24	27	15	10	8	3	1	.....	.....	.....
Daviess	742	172	143	103	96	64	59	35	25	19	8	5	10	3
Dearborn	344	92	71	59	38	25	16	14	12	7	5	1	2	2
Decatur	345	106	66	56	39	26	12	13	6	6	5	1	1	8
Dekalb	296	87	75	51	27	17	19	4	7	2	2	3	1	1
Delaware	1,044	326	232	149	96	91	51	39	19	13	12	10	4	2
Dubois	424	85	80	56	55	42	33	27	17	13	7	5	3	1
Elkhart	453	137	103	80	49	33	17	15	11	1	3	.....	1	3
Fayette	212	59	59	29	12	17	7	5	6	3	1	1	1	2
Floyd	289	104	63	35	37	18	10	8	3	3	3	2	1	2
Fountain	305	91	70	42	33	30	17	9	5	1	2	1	3	1
Franklin	192	60	41	26	16	17	8	6	8	6	2	1	1	.....
Fulton	235	68	58	35	29	17	10	6	5	3	1	2	1	.....

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TABLE A—Continued.

COUNTIES.	1902.												Sex.			Color.				Nationality.				Not Reported.	
																White.		Color'd.		American.		Foreign.			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Males.	Females.	Fathers.	Mothers.	Fathers.	Mothers.	Fathers.	Mothers.
Wabash	28	25	19	21	27	30	8	5	8	38	42	17	135	133	268	134	133	1	....	264	264	....	....	....	....
Warren	24	13	11	8	11	5	11	10	16	11	5	7	70	62	132	70	62	....	....	129	128	1	2	....	....
Warrick	28	31	23	23	21	20	16	18	19	30	32	28	142	147	289	138	143	4	4	156	174	37	20	94	93
Washington	22	25	16	17	19	23	15	24	23	26	15	18	121	122	243	121	122	....	....	241	241	....	....	....	....
Wayne	62	45	45	61	42	53	67	52	55	53	43	58	353	283	636	339	270	14	13	599	614	26	14	5	2
Wells	50	30	36	20	20	45	41	41	17	35	34	31	211	189	400	211	189	....	....	377	388	8	3	6	....
White	41	37	42	46	34	20	59	46	34	57	26	26	247	221	468	247	221	....	....	97	101	....	....	365	361
Whitley	25	17	28	18	17	10	20	20	36	21	24	27	124	139	263	124	139	....	....	254	256	7	5	1	1
Totals	4,049	3,766	3,652	3,441	3,204	3,233	3,979	3,912	3,408	4,061	3,314	3,243	22,393	20,869	43,262	22,015	20,498	378	371	38,351	39,206	2,565	1,968	1,903	1,635

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TABLE B.

Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births, Year Ending December 31, 1902.

COUNTIES.	Total.	Number of Children Born to Each Mother.												
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.
Adams	495	114	92	78	62	38	31	35	11	14	4	.....	6	10
Allen	1,273	356	252	178	148	103	71	61	36	19	17	5	9	18
Bartholomew	549	162	105	82	54	42	35	15	19	16	5	1	3	10
Benton	299	99	65	33	30	23	16	6	8	9	1	2	1	6
Blackford	475	128	97	78	48	35	26	26	20	7	6	1	1	2
Boone	446	130	78	61	63	38	24	17	12	6	4	2	3	8
Brown	212	44	41	25	26	27	12	9	9	6	3	3	5	2
Carroll	248	58	46	35	35	30	13	10	7	3	3	2	2	4
Cass	388	131	86	51	31	28	18	13	5	4	1	2	1	17
Clark	528	157	98	83	60	57	25	17	17	7	3	1	1	2
Clay	767	192	145	117	86	72	48	39	22	12	7	7	12	8
Clinton	434	136	98	66	42	36	21	11	10	8	2	2	2	.....
Crawford	249	62	49	50	24	27	15	10	8	3	1	.....	.....	.....
Daviess	742	172	143	103	96	64	59	35	25	19	8	5	10	3
Dearborn	344	92	71	59	38	25	16	14	12	7	5	1	2	2
Decatur	345	106	66	56	39	26	12	13	6	6	5	1	1	8
Dekalb	296	87	75	51	27	17	19	4	7	2	2	3	1	1
Delaware	1,044	326	232	149	96	91	51	39	19	13	12	10	4	2
Dubois	424	85	80	56	55	42	33	27	17	13	7	5	3	1
Elkhart	453	137	103	80	49	33	17	15	11	1	3	.....	1	3
Fayette	212	59	59	29	12	17	7	5	6	3	1	1	1	2
Floyd	289	104	63	35	37	18	10	8	3	3	3	2	1	2
Fountain	305	91	70	42	33	30	17	9	5	1	2	1	3	1
Franklin	192	60	41	26	16	17	8	6	8	6	2	1	1	.....
Fulton	235	68	58	35	29	17	10	6	5	3	1	2	1	.....

TABLE B—Continued.

COUNTIES.	Total.	Number of Children Born to Each Mother.												
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Eleventh.	Twelfth and Over.	Not Reported.
Gibson	599	168	120	87	60	51	36	24	20	14	7	5	4	3
Grant	694	214	188	104	67	40	23	17	13	12	7	1	3	5
Greene	517	137	121	72	67	38	21	22	12	8	3	5	2	9
Hamilton	574	180	106	88	58	38	37	33	13	9	8	2	2	.....
Hancock	375	103	76	56	42	39	23	14	7	6	5	3	.....	1
Harrison	320	107	54	45	35	34	17	11	3	5	4	3	1	1
Hendricks	324	95	66	51	39	23	21	14	6	1	1	2	2	3
Henry	539	153	121	90	54	48	20	20	9	7	6	6	2	3
Howard	549	182	91	77	60	62	28	16	7	10	4	1	.....	1
Huntington	532	165	130	81	52	38	24	13	13	7	3	4	1	1
Jackson	567	161	103	92	71	53	38	17	11	6	6	3	3	3
Jasper	271	90	41	36	41	13	11	9	11	3	4	3	1	8
Jay	576	165	106	77	67	45	39	21	14	16	6	4	2	14
Jefferson	255	58	49	53	42	16	10	10	8	2	4	1	2	.....
Jennings	280	82	56	43	30	21	21	8	8	4	2	1	2	2
Johnson	235	68	57	44	21	19	7	10	2	3	3	.....	.....	1
Knox	860	190	186	117	96	76	73	47	33	14	9	5	13	1
Kosciusko	506	162	123	81	50	28	29	11	11	3	2	3	1	2
Lagrange	324	78	75	48	37	27	26	14	8	7	2	1	1	.....
Lake	437	135	112	90	42	29	13	14	1	1	.....	.....	.....	.....
Laporte	768	217	160	130	75	54	52	22	15	19	10	3	7	4
Lawrence	578	166	108	103	68	39	30	19	16	9	6	6	.....	8
Madison	1,831	558	392	285	176	130	97	68	36	19	21	13	12	24
Marion	3,862	1,280	865	556	385	273	154	120	89	46	31	20	19	24
Marshall	473	129	107	71	57	38	29	18	10	5	5	1	2	1
Martin	282	73	50	40	32	28	18	10	14	3	3	1	8	2
Miami	341	90	77	52	37	25	17	14	10	9	4	1	3	2
Monroe	289	65	49	44	25	24	13	16	10	8	1	3	5	6
Montgomery	548	180	117	73	63	44	22	18	10	14	3	1	3	.....
Morgan	313	101	70	44	37	19	15	10	2	3	1	1	2	8

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Newton	222	64	49	42	21	15	9	3	5	4	5	1	2	2
Noble	341	110	82	48	41	29	10	6	4	8	3	.....	.....	.....
Ohio	65	21	13	13	2	5	2	2	3	1	3	.....	.....	.....
Orange	257	81	54	41	26	21	18	4	3	3	3	2	.....	1
Owen	254	65	51	48	25	18	18	10	5	4	4	.....	4	2
Parke	263	71	66	34	33	15	9	17	8	5	2	3	.....	.....
Perry	313	83	70	50	32	38	28	15	14	5	3	3	2	.....
Pike	330	73	65	62	33	35	18	14	7	6	3	3	4	7
Porter	232	64	37	37	22	22	15	12	10	6	2	1	3	1
Posey	466	137	94	63	57	35	28	25	13	6	4	2	1	1
Pulaski	137	30	28	22	19	10	14	5	4	1	1	.....	2	1
Putnam	448	141	98	69	50	28	20	19	10	3	6	3	1	.....
Randolph	538	147	123	86	69	33	30	15	15	9	4	4	2	1
Ripley	283	82	67	40	29	22	15	13	8	2	3	1	1	.....
Rush	306	95	65	49	30	28	13	8	6	3	3	3	.....	2
Scott	147	51	22	21	12	14	9	6	5	5	.....	.....	1	1
Shelby	514	157	114	76	54	34	24	20	11	5	9	1	2	7
Spencer	230	62	48	35	32	14	7	13	10	3	2	.....	3	1
Starke	177	47	37	25	20	18	8	6	8	3	2	2	1	.....
Steuben	156	56	39	18	18	8	8	3	1	3	.....	.....	.....	2
St. Joseph	907	246	183	125	93	70	59	36	28	23	13	10	12	9
Sullivan	421	152	127	57	39	23	13	9	1	.....	.....	.....	.....	.....
Switzerland	170	61	26	18	18	14	10	3	6	3	6	.....	1	4
Tippecanoe	422	127	91	51	47	25	32	18	7	5	1	3	2	13
Tipton	327	82	71	55	43	27	17	8	7	5	2	3	1	6
Union	101	36	26	19	6	8	5	1	.....	.....	.....	.....	.....	.....
Vanderburgh	1,188	358	217	164	137	88	83	50	36	17	11	11	9	7
Vermillion	317	119	66	37	34	24	13	6	8	2	4	2	.....	3
Vigo	1,169	360	240	184	121	86	58	41	36	19	7	9	7	1
Wabash	268	67	59	47	36	25	11	7	6	6	1	1	.....	2
Warren	132	51	27	15	11	6	6	2	7	.....	1	.....	1	5
Warrick	289	65	61	52	24	21	12	7	3	.....	.....	.....	.....	44
Washington	243	66	53	27	36	21	21	5	5	2	4	2	.....	1
Wayne	696	216	134	88	65	50	23	27	13	6	5	.....	4	5
Wells	400	124	91	58	35	31	25	8	11	5	3	4	4	1
White	468	131	85	68	61	43	25	13	12	13	5	2	4	6
Whitley	263	93	52	42	18	16	14	13	5	3	2	1	1	3
Total	43,262	12,699	9,120	6,484	4,671	3,384	2,308	1,580	1,071	658	406	240	253	388

TABLE B—Continued.

Births, Number of Children Born to Each Mother, Grouped Ages of Parents, Still, Plurality and Illegitimate Births, Year Ending December 31, 1902.

COUNTIES.	Grouped Ages of Parents.														Still Births.		Plurality Births.		Illegitimate Births.	
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Rep'd.							
	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Father.	Father.	Mother.	Male.	Female.	Male.	Female.	Male.	Female.
Adams	2	42	122	252	167	159	57	37	7	.....	1	.....	135	1	2	3	3	5	1	4
Allen	4	84	460	633	494	410	226	80	22	1	.....	1	48	47	26	11	14	22	9	7
Bartholomew	3	44	229	296	200	169	83	30	17	.....	1	1	5	.....	8	6	9	11	2	3
Benton	5	22	128	160	102	86	39	15	8	1	1	.....	13	12	5	2	2	4	1	1
Blackford	4	59	205	269	178	122	65	20	12	.....	2	.....	6	2	9	1	4	2	9	4
Boone	4	60	192	225	148	120	72	28	14	.....	3	.....	6	6	7	3	7	6	.....	1
Brown	3	35	86	104	85	53	27	17	6	.....	.....	.....	2	.....	2	2	3	3	4	.....
Carroll	2	17	93	132	106	80	36	13	4	.....	.....	.....	4	3	.....	.....	1	5	.....	1
Cass	3	43	173	189	109	73	47	13	2	.....	.....	.....	50	66	.....	.....	6	2	.....	.....
Clark	5	49	231	272	203	175	67	23	9	.....	.....	.....	8	4	8	10	5	5	5	2
Clay	9	108	327	389	291	206	106	52	14	.....	2	.....	10	4	7	16	9	7	3	3
Clinton	9	49	181	225	152	115	54	23	12	.....	1	.....	20	17	6	4	4	6	4	5
Crawford	69	91	86	78	44	42	32	38	14	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....
Daviess	6	61	303	384	286	239	108	44	19	.....	.....	.....	10	4	9	15	7	13	6	5
Dearborn	1	19	115	168	137	110	58	23	7	.....	1	.....	18	17	5	8	8	6	3	.....
Decatur	7	37	131	175	136	94	41	21	12	.....	.....	.....	8	8	.....	.....	5	15	.....	.....
Dekalb	3	27	131	166	105	88	41	14	8	.....	.....	.....	7	.....	6	2	2	.....	.....	4
Delaware	7	138	486	554	375	300	128	37	17	.....	3	.....	20	7	7	3	9	7	7	10
Dubois	.....	28	131	193	196	173	83	23	5	.....	.....	.....	2	.....	2	.....	6	8	3	1
Elkhart	4	30	190	257	182	152	57	9	4	.....	.....	.....	15	4	8	3	1	1	.....	1

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Fayette	13	6	113	92	75	67	7	19	.....	2	.....	.....	.....	22	5	6	2	5	2	.....
Floyd	3	30	127	146	105	92	40	10	3	.....	.....	.....	3	8	5	5	3	3	3	2
Fountain	1	17	123	168	104	93	64	23	10	3	.....	.....	2	.....	8	7	1	1	1	3
Franklin	4	12	73	85	72	70	31	18	5	.....	.....	.....	5	5	.....	.....	3	1	1	1
Fulton	8	27	97	129	79	62	36	10	3	.....	.....	.....	6	1	3	2	6	6	5	3
Gibson	5	64	245	286	232	175	86	29	13	.....	3	.....	12	42	4	11	2	4	6	7
Grant	13	77	313	404	229	140	71	27	2	.....	.....	.....	64	44	7	3	1	3	1	2
Greene	6	55	235	278	175	148	71	22	3	.....	2	1	16	6	6	6	9	7	7	4
Hamilton	10	85	253	273	216	180	79	26	8	.....	1	.....	2	5	8	9	5	5	3	7
Hancock	7	36	146	204	137	100	65	30	11	.....	.....	.....	4	.....	7	4	7	3	1	2
Harrison	3	35	125	148	107	106	49	28	8	1	1	1	24	.....	5	.....	2	2	7	1
Hendricks	3	34	130	158	137	91	45	10	4	.....	.....	.....	3	29	7	1	2	2	3	1
Henry	7	54	227	295	194	150	81	31	15	.....	2	.....	6	2	7	14	7	7	5	6
Howard	5	62	349	315	157	153	19	7	3	.....	1	.....	4	1	.....	.....	1	1	3	2
Huntington	3	54	246	297	189	155	75	20	12	1	1	.....	3	2	8	3	5	1	2	2
Jackson	9	52	220	327	212	154	79	24	19	.....	3	2	16	3	13	13	7	7	9	5
Jasper	2	28	95	126	93	60	33	18	6	.....	1	2	37	37	4	.....	2	2	.....	3
Jay	8	76	240	285	199	159	93	42	9	.....	2	1	14	4	12	6	10	10	4	11
Jefferson	2	19	101	133	82	74	46	23	9	.....	2	.....	10	3	6	3	3	3	3	3
Jennings	2	21	97	155	120	79	42	17	7	.....	2	.....	6	4	4	4	5	3	1	6
Johnson	2	31	124	141	85	52	13	7	4	.....	2	.....	1	.....	6	4	3	5	1	4
Knox	9	103	300	446	327	261	160	39	33	.....	6	.....	17	3	9	4	8	8	9	6
Kosciusko	12	49	252	248	155	143	47	33	3	4	.....	.....	34	26	7	4	.....	6	10	2
Lagrange	2	37	126	149	119	99	53	31	15	.....	1	.....	.....	.....	4	5	7	9	3	2
Lake	1	64	223	199	87	51	2	.....	1	.....	.....	.....	123	123	.....	.....	.....	.....	.....	.....
Laporte	3	52	314	443	291	217	134	46	11	.....	1	1	7	4	7	4	8	4	1	3
Lawrence	6	60	207	281	209	166	70	15	15	.....	6	.....	57	48	10	5	10	6	14	6
Madison	29	221	854	1,036	684	480	191	61	16	.....	4	.....	31	11	33	17	28	16	23	18
Marion	39	366	1,522	2,143	1,516	1,102	514	156	77	.....	5	.....	141	47	53	41	52	44	70	60
Marshall	6	49	204	263	185	125	56	16	8	.....	.....	.....	7	13	6	4	7	6	7	2
Martin	2	25	116	148	94	79	50	25	14	1	1	.....	5	4	.....	.....	.....	.....	1	.....
Miami	2	31	143	185	103	77	46	18	8	.....	.....	.....	36	27	8	3	1	5	1	4
Monroe	4	42	110	126	95	68	36	18	6	.....	2	.....	14	13	3	3	1	3	.....	3
Montgomery	5	62	220	293	211	151	79	29	14	.....	3	.....	8	5	13	4	10	6	5	8
Morgan	2	44	153	160	118	99	31	3	1	.....	.....	.....	6	5	4	4	2	1	1	2
Newton	1	26	90	111	80	52	27	16	3	.....	.....	.....	21	17	.....	.....	.....	.....	.....	.....
Noble	3	38	155	190	115	94	51	16	9	.....	.....	.....	7	2	1	3	1	1	3	2
Ohio	.....	6	12	35	35	16	10	4	2	.....	.....	.....	6	4	.....	.....	.....	.....	1	2
Orange	.....	23	118	149	88	75	32	9	3	.....	.....	.....	16	1	5	5	.....	.....	1	3
Owen	1	22	95	115	78	59	31	20	10	1	1	.....	36	35	.....	.....	2	2	2	2

TABLE B—Continued.

COUNTIES.	Grouped Ages of Parents.														Still Births.		Plurality Births.		Illegitimate Births.	
	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.	70 to 80.	Not Rep'd.							
	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Mother.	Father.	Father.	Father.	Mother.	Male.	Female.	Male.	Female.	Male.	Female.
Parke	3	53	105	113	75	69	70	32	7	.....	.....	.....	1	.....	2	.....	1	3	.....	2
Perry	6	50	135	165	125	109	57	23	13	.....	3	1	.....	3	6	4	3	3	6	8
Pike	16	19	136	138	125	111	44	47	3	5	1	.....	3	8	5	4	3	1	11	6
Porter	1	18	92	128	86	70	39	13	9	.....	2	.....	.....	.....	.....	.....	2	4	.....	1
Posey	1	62	188	248	182	128	68	23	12	.....	1	.....	9	.....	3	2	5	5	3	5
Pulaski	.....	9	44	71	54	40	24	13	8	.....	.....	.....	7	4	6	1	.....	.....	2	2
Putnam	4	54	191	232	151	133	78	23	3	.....	2	.....	13	.....	12	5	7	5	4	8
Randolph	8	50	252	319	180	138	74	23	7	.....	.....	.....	11	2	9	4	1	5	4	2
Ripley	....	2	17	34	25	14	9	3	1	.....	.....	.....	228	227	1	2	4	2	4	1
Rush	8	49	135	162	115	79	39	14	4	.....	1	.....	2	.....	4	1	2	.....	1	1
Scott	4	20	61	64	39	46	21	3	4	.....	.....	.....	16	12	2	1	1	3	3	3
Shelby	2	49	248	287	175	132	59	27	8	.....	.....	.....	15	12	5	5	2	12	5	4
Spencer	2	19	74	115	103	77	31	8	5	.....	2	.....	10	8	2	4	4	2	3	.....
Starke	2	25	73	85	76	55	20	8	5	.....	.....	.....	.....	3	.....	1	2	.....	.....	.....
Steuben	3	17	71	86	55	38	18	9	3	.....	.....	.....	4	4	1	4	4	.....	1	1
St. Joseph	3	61	365	500	383	277	131	58	15	1	.....	.....	.....	.....	18	13	6	14	3	4
Sullivan	1	182	309	126	46	54	21	20	5	.....	.....	.....	39	39	3	4	.....	.....	1	.....
Switzerland	.....	12	55	76	73	58	23	12	4	.....	1	.....	9	7	.....	1	4	5	.....	.....
Tippecanoe	3	27	179	241	163	116	46	16	4	.....	1	.....	16	12	5	3	9	11	4	3
Tipton	8	63	149	174	101	66	42	13	6	.....	2	.....	14	6	3	7	7	3	2	2
Union	.....	9	57	63	34	27	9	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vanderburgh	9	80	120	881	805	196	183	14	23	.....	3	.....	37	9	11	13	10	6	18	30
Vermillion	5	48	106	137	76	60	45	15	4	.....	2	.....	74	52	8	6	5	5	6	1
Vigo	19	123	507	646	426	311	161	63	27	.....	5	.....	21	23	20	18	4	2	11	16

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Wabash	2	20	134	135	89	78	27	20	10	1	.....	.....	2	10	4	.....	7	1	3	1
Warren	2	25	65	70	43	35	16	.....	3	.....	1	.....	.....	.....	.....	1	2	2	.....	.....
Warrick	4	79	131	117	75	39	24	2	6	.....	.....	.....	47	50	2	2	2	2	2	2
Washington	3	25	100	108	72	62	29	15	7	.....	1	.....	29	31	2	3	1	3	1	3
Wayne	6	51	276	350	233	189	99	36	10	1	2	.....	4	3	12	8	7	5	3	6
Wells	12	58	186	209	123	103	50	19	11	.....	.....	.....	9	2	4	3	4	14	6	6
White	3	44	164	232	208	169	74	14	9	.....	1	.....	3	3	8	4	7	5	4	2
Whitley	8	28	140	141	68	66	42	26	3	.....	.....	.....	1	1	3	4	1	1	.....	2
Total	541	4,669	17,758	22,729	15,869	11,879	5,845	2,170	856	23	102	12	1,826	1,339	561	424	451	450	388	374

TABLE C.

Marriages by Months, Color and Nationality, Year Ending December 31, 1902.

COUNTIES.	1902.												Color.		Nationality.						Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	White.	Colored.	American.		Foreign.		Not Reported.		
															Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Adams	20	15	16	19	10	14	17	11	12	23	21	25	203	.....	179	191	19	10	5	2	203
Allen	54	51	48	52	36	74	46	40	58	94	73	102	721	7	653	671	72	52	3	5	728
Bartholomew	20	17	24	20	25	15	21	22	22	31	19	21	256	1	255	253	2	3	.....	1	257
Benton	12	13	8	8	4	8	4	5	7	6	12	14	100	1	98	99	2	1	1	1	101
Blackford	17	13	8	20	16	22	17	15	20	19	21	30	218	.....	200	203	17	15	1	.....	218
Boone	23	18	21	24	16	18	7	22	21	26	22	22	240	.....	240	240	.....	.....	.....	.....	240
Brown	8	8	8	4	5	4	6	6	5	6	11	6	77	.....	60	60	.....	.....	17	17	77
Carroll	21	19	16	15	10	13	5	8	8	20	21	16	172	.....	172	171	.....	1	.....	.....	172
Cass	27	24	24	19	29	43	27	22	31	28	40	13	326	1	261	251	44	46	22	30	327
Clark	32	30	29	36	41	43	32	38	41	39	35	50	387	59	355	362	8	1	83	83	446
Clay	31	27	26	38	20	28	25	21	33	48	33	26	350	6	323	338	33	18	.....	.....	356
Clinton	38	29	19	22	26	12	17	29	23	29	33	39	314	2	303	309	4	1	9	6	316
Crawford	17	8	14	7	6	15	11	13	12	21	19	16	159	.....	122	124	27	25	10	10	159
Daviess	20	16	16	17	22	11	19	22	20	36	35	24	258	.....	252	254	5	3	1	1	258
Dearborn	17	19	12	23	11	23	22	18	19	23	42	12	238	3	234	236	7	3	.....	2	241
Decatur	19	9	12	16	9	19	10	20	28	25	21	15	202	1	158	158	1	1	44	44	203
Dekalb	34	20	26	17	17	22	12	16	18	24	25	27	288	.....	246	251	12	6	.....	1	258
Delaware	80	40	34	75	47	31	47	26	25	65	56	48	559	15	554	569	19	4	1	1	574
Dubois	9	11	1	40	13	5	8	11	16	19	22	7	162	.....	160	159	2	2	.....	1	162
Elkhart	69	22	27	20	32	32	36	44	61	42	46	21	452	....	423	427	24	16	5	9	452

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Fayette	8	9	9	10	10	20	6	11	12	16	13	7	124	7	126	122	2	6	3	3	131
Floyd	30	16	11	25	23	19	35	21	23	32	22	28	259	26	270	278	10	2	5	5	285
Fountain	26	19	20	18	12	19	18	15	24	36	19	26	251	1	250	250	2	2	.....	.....	252
Franklin	10	10	8	16	8	10	14	7	11	7	9	13	123	.....	109	112	14	10	.....	1	123
Fulton	14	14	11	22	13	10	5	10	24	21	13	16	173	.....	169	169	.....	.....	4	4	173
Gibson	23	14	12	22	13	16	11	28	11	25	17	20	206	6	212	212	.....	.....	.....	.....	212
Grant	49	53	64	53	54	65	52	47	51	59	51	68	654	12	646	650	20	15	.....	1	666
Greene	31	25	36	29	21	22	19	27	23	38	31	40	315	27	309	310	4	3	29	29	342
Hamilton	37	31	26	28	18	15	14	13	22	36	24	21	279	6	283	283	2	2	.....	.....	285
Hancock	12	15	27	14	10	14	26	17	19	33	22	22	223	8	226	231	5	.....	.....	.....	231
Harrison	10	17	10	22	9	16	14	19	25	11	10	21	181	3	184	184	.....	.....	.....	.....	184
Hendricks	19	5	4	18	7	9	20	11	7	18	14	14	146	.....	145	144	.....	.....	1	2	146
Henry	36	15	19	21	17	20	14	18	24	37	30	32	276	7	280	281	2	.....	1	2	283
Howard	18	20	23	15	19	42	20	33	25	38	38	37	323	5	294	292	8	9	26	27	328
Huntington	24	10	24	18	15	21	25	16	27	25	25	14	244	.....	241	241	3	3	.....	.....	244
Jackson	24	21	24	15	25	26	14	19	29	25	28	19	266	3	261	267	6	1	2	1	269
Jasper	19	20	7	6	5	11	9	8	12	19	18	9	142	1	134	137	9	6	.....	.....	143
Jay	23	16	19	20	16	17	19	12	14	37	27	15	234	1	231	232	4	3	.....	.....	235
Jefferson	15	15	14	24	20	34	20	20	26	26	25	27	261	5	256	253	7	3	3	10	266
Jennings	9	10	11	14	7	14	6	8	13	13	13	10	7	116	6	119	121	2	1	1	.....	122
Johnson	17	23	16	18	11	14	10	15	27	19	20	15	199	6	205	205	.....	.....	.....	.....	205
Knox	33	26	19	44	23	26	28	30	30	49	31	20	346	13	338	337	12	14	9	8	359
Kosciusko	17	18	27	22	17	17	19	20	28	27	30	24	265	1	266	266	.....	.....	.....	.....	266
Lagrange	14	8	11	12	9	11	12	17	8	15	14	19	150	.....	149	148	1	2	.....	.....	150
Lake	24	30	26	35	40	39	29	25	20	31	30	37	366	.....	301	303	60	63	5	.....	366
Laporte	27	33	12	40	33	45	20	25	23	42	27	14	339	2	265	288	69	48	7	5	341
Lawrence	22	11	18	27	21	19	22	20	25	19	26	23	253	.....	253	253	.....	.....	.....	.....	253
Madison	80	65	76	88	78	61	87	76	88	69	98	81	909	38	891	879	53	65	3	3	947
Marion	139	123	90	198	77	125	128	159	132	212	132	303	1,662	156	1,678	1,707	128	95	12	16	1,818
Marshall	26	10	16	17	18	23	20	8	17	28	26	33	242	.....	234	236	7	4	1	2	242
Martin	7	13	10	14	9	4	3	7	4	15	19	6	111	.....	96	102	15	9	.....	.....	111
Miami	20	14	24	19	21	21	25	18	37	25	28	22	267	7	262	264	11	7	1	3	274
Monroe	20	18	21	15	14	17	11	22	10	26	18	19	206	5	210	211	1	.....	.....	.....	211
Montgomery	28	21	18	28	18	20	18	17	22	34	24	37	283	2	247	248	3	2	35	35	285
Morgan	15	14	12	9	10	13	10	23	20	13	13	10	162	.....	161	162	1	.....	.....	.....	162
Newton	15	6	9	8	6	8	3	5	4	10	6	16	96	.....	93	94	3	2	.....	.....	96
Noble	18	10	21	18	10	12	10	5	7	19	13	14	157	.....	150	156	5	1	2	.....	157
Ohio	5	6	7	2	3	4	1	2	6	1	.....	8	41	4	44	44	.....	.....	1	1	45
Orange	31	16	21	16	6	14	10	10	10	12	9	22	176	1	177	177	.....	.....	.....	.....	177
Owen	22	14	4	8	8	13	22	26	16	12	20	16	181	.....	105	105	.....	.....	76	76	181

TABLE C.

Marriages by Months, Color and Nationality, Year Ending December 31, 1902.

COUNTIES.	1902.												Color.		Nationality.						Total.
															American.		Foreign.		Not Reported.		
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	White.	Colored.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Adams	20	15	16	19	10	14	17	11	12	23	21	25	203	.....	179	191	19	10	5	2	203
Allen	54	51	48	52	36	74	46	40	58	94	73	102	721	7	653	671	72	52	3	5	728
Bartholomew	20	17	24	20	25	15	21	22	22	31	19	21	256	1	255	253	2	3	.....	1	257
Benton	12	13	8	8	4	8	4	5	7	6	12	14	100	1	98	99	2	1	1	1	101
Blackford	17	13	8	20	16	22	17	15	20	19	21	30	218	.....	200	203	17	15	1	.....	218
Boone	23	18	21	24	16	18	7	22	21	26	22	22	240	.....	240	240	.....	.....	.....	.....	240
Brown	8	8	8	4	5	4	6	6	5	6	11	6	77	.....	60	60	.....	.....	17	17	77
Carroll	21	19	16	15	10	13	5	8	8	20	21	16	172	.....	172	171	.....	1	.....	.....	172
Cass	27	24	24	19	29	43	27	22	31	28	40	13	326	1	261	251	44	46	22	30	327
Clark	32	30	29	36	41	43	32	38	41	39	35	50	387	59	355	362	8	1	83	83	446
Clay	31	27	26	38	20	28	25	21	33	48	33	26	350	6	323	338	33	18	.....	.....	356
Clinton	38	29	19	22	26	12	17	29	23	29	33	39	314	2	303	369	4	1	9	6	316
Crawford	17	8	14	7	6	15	11	13	12	21	19	16	159	.....	122	124	27	25	10	10	159
Daviess	20	16	16	17	22	11	19	22	20	36	35	24	258	.....	252	254	5	3	1	1	258
Dearborn	17	19	12	23	11	23	22	18	19	23	42	12	238	3	234	236	7	3	.....	2	241
Decatur	19	9	12	16	9	19	10	20	28	25	21	15	202	1	158	158	1	1	44	44	203
Dekalb	34	20	26	17	17	22	12	16	18	24	25	27	258	.....	246	251	12	6	.....	1	258
Delaware	80	40	34	75	47	31	47	26	25	65	56	48	559	15	554	569	19	4	1	1	574
Dubois	9	11	1	49	13	5	8	11	16	19	22	7	162	.....	160	159	2	2	.....	1	162
Elkhart	69	22	27	20	32	32	36	44	61	42	46	21	452	....	423	427	24	16	5	9	452

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Fayette	8	9	9	10	10	20	6	11	12	16	13	7	124	7	126	122	2	6	3	3	131
Floyd	30	16	11	25	23	19	35	21	23	32	22	28	259	26	270	278	10	2	5	5	285
Fountain	26	19	20	18	12	19	18	15	24	36	19	26	251	1	250	250	2	2	.....	.....	252
Franklin	10	10	8	16	8	10	14	7	11	7	9	13	123	.....	109	112	14	10	.....	1	123
Fulton	14	14	11	22	13	10	5	10	24	21	13	16	173	.....	169	169	.....	.....	4	4	173
Gibson	23	14	12	22	13	16	11	28	11	25	17	20	206	6	212	212	.....	.....	.....	.....	212
Grant	49	53	64	53	54	65	52	47	51	59	51	68	654	12	646	650	20	15	.....	1	666
Greene	31	25	36	29	21	22	19	27	23	38	31	40	315	27	309	310	4	3	29	29	342
Hamilton	37	31	26	28	18	15	14	13	22	36	24	21	279	6	283	283	2	2	.....	.....	285
Hancock	12	15	27	14	10	14	26	17	19	33	22	22	223	8	226	231	5	.....	.....	.....	231
Harrison	10	17	10	22	9	16	14	19	25	11	10	21	181	3	184	184	.....	.....	.....	.....	184
Hendricks	19	5	4	18	7	9	20	11	7	18	14	14	146	.....	145	144	.....	.....	1	2	146
Henry	36	15	19	21	17	20	14	18	24	37	30	32	276	7	280	281	2	.....	1	2	283
Howard	18	20	23	15	19	42	20	33	25	38	38	37	328	5	334	339	2	0	02	37	339

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TABLE C—Continued.

COUNTIES.	1902.												Color.		Nationality.						Total.
															American.		Foreign.		Not Reported.		
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	White.	Colored.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Parke	22	10	12	12	11	12	15	23	33	29	22	36	235	2	228	232	9	5	.....	.....	237
Perry	18	16	12	31	13	20	13	16	24	14	23	17	207	10	204	209	13	6	.....	2	217
Pike	26	22	22	25	21	16	23	24	9	17	14	23	241	1	242	242	.....	.....	.....	.....	242
Porter	11	6	11	10	12	19	19	11	11	17	14	19	160	.....	130	141	30	19	.....	.....	160
Posey	18	15	14	21	15	15	26	21	20	31	23	22	217	24	239	241	2	.....	.....	.....	241
Pulaski	8	8	6	15	11	17	7	3	7	19	12	9	121	1	117	121	5	1	.....	.....	122
Putnam	21	16	25	6	10	4	18	8	24	23	22	16	187	6	189	193	4	.....	.....	.....	193
Randolph	28	18	27	22	20	21	19	14	34	22	24	38	285	2	286	287	1	.....	.....	.....	287
Ripley	19	20	9	17	12	14	11	16	14	18	19	15	184	.....	.....	.....	.....	.....	184	184	184
Rush	9	13	13	11	6	15	12	18	15	22	19	17	163	7	170	170	.....	.....	.....	.....	170
Scott	.....	1	5	1	2	2	8	4	4	9	10	6	52	.....	52	52	.....	.....	.....	.....	52
Shelby	31	28	13	21	12	18	24	24	19	8	21	21	235	5	239	240	1	.....	.....	.....	240
Spencer	34	15	17	17	14	22	15	27	16	20	28	28	246	7	221	221	1	1	31	31	253
Starke	8	6	5	4	11	7	5	9	7	7	8	10	87	.....	74	80	13	7	.....	.....	87
Steuben	21	9	13	15	6	12	13	12	7	24	16	16	164	.....	163	164	1	.....	.....	.....	164
St. Joseph	41	34	26	44	57	45	71	55	37	94	76	32	603	9	497	509	114	103	1	.....	612
Sullivan	15	24	21	17	16	14	23	24	20	28	32	39	272	1	270	270	46	3	.....	.....	273
Switzerland	13	7	12	11	6	4	5	6	10	8	9	6	94	3	97	97	.....	.....	.....	.....	97
Tippecanoe	30	16	16	24	23	27	22	22	25	41	32	32	306	4	295	294	14	14	1	2	310
Tipton	17	23	17	13	13	17	15	5	18	18	18	20	194	.....	191	193	2	.....	1	1	194
Union	3	4	2	6	1	4	2	2	2	8	6	13	52	1	53	53	.....	.....	.....	.....	53
Vanderburgh	38	68	40	74	66	72	75	47	45	73	47	94	648	91	696	718	37	14	6	7	739
Vermillion	7	19	11	6	9	9	4	6	9	14	10	21	122	3	102	107	13	8	10	10	125
Vigo	49	28	39	52	72	69	54	67	70	103	95	75	734	39	743	752	30	21	.....	.....	773

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TABLE C—Continued.

COUNTIES.	1902.												Color.		Nationality.						Total.
															American.		Foreign.		Not Reported.		
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	White.	Colored.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Parke	22	10	12	12	11	12	15	23	33	29	22	36	235	2	228	232	9	5	.....	.....	237
Perry	18	16	12	31	13	20	13	16	24	14	23	17	207	10	204	209	13	6	.....	2	217
Pike	26	22	22	25	21	16	23	24	9	17	14	23	241	1	242	242	.....	.....	.....	.....	242
Porter	11	6	11	10	12	19	19	11	11	17	14	19	160	.....	130	141	30	19	.....	.....	160
Posey	18	15	14	21	15	15	26	21	20	31	23	22	217	24	239	241	2	.....	.....	.....	241
Pulaski	8	8	6	15	11	17	7	3	7	19	12	9	121	1	117	121	5	1	.....	.....	122
Putnam	21	16	25	6	10	4	18	8	24	23	22	16	187	6	189	193	4	.....	.....	.....	193
Randolph	28	18	27	22	20	21	19	14	34	22	24	38	285	2	286	287	1	.....	.....	.....	287
Ripley	19	20	9	17	12	14	11	16	14	18	19	15	184	.....	.....	.....	.....	.....	184	184	184
Rush	9	13	13	11	6	15	12	18	15	22	19	17	163	7	170	170	.....	.....	.....	.....	170
Scott	.....	1	5	1	2	2	8	4	4	9	10	6	52	.....	52	52	.....	.....	.....	.....	52
Shelby	31	28	13	21	12	18	24	24	19	8	21	21	235	5	239	240	1	.....	.....	.....	240
Spencer	34	15	17	17	14	22	15	27	16	20	28	28	246	7	221	221	1	1	31	31	253
Starke	8	6	5	4	11	7	5	9	7	7	8	10	87	.....	74	80	13	7	.....	.....	87
Steuben	21	9	13	15	6	12	13	12	7	24	16	16	164	.....	163	164	1	.....	.....	.....	164
St. Joseph	41	34	26	44	57	45	71	55	37	94	76	32	603	9	497	509	114	103	1	.....	612
Sullivan	15	24	21	17	16	14	23	24	20	28	32	39	272	1	270	270	88	3	.....	.....	273
Switzerland	13	7	12	11	6	4	5	6	10	8	9	6	94	3	97	97	.....	.....	.....	.....	97
Tippecanoe	30	16	16	24	23	27	22	22	25	41	32	32	306	4	295	294	14	14	1	2	310
Tipton	17	23	17	13	13	17	15	5	18	18	18	20	194	.....	191	193	2	.....	1	1	194
Union	3	4	2	6	1	4	2	2	2	8	6	13	52	1	53	53	.....	.....	.....	.....	53
Vanderburgh	38	68	40	74	66	72	75	47	45	73	47	94	648	91	696	718	37	14	6	7	739
Vermillion	7	19	11	6	9	9	4	6	9	14	10	21	122	3	102	107	13	8	10	10	125
Vigo	49	28	39	52	72	69	54	67	70	103	95	75	734	39	743	752	30	21	.....	.....	773

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TABLE D.

Marriages, Grouped Ages, for the Year Ending December 31, 1902.

COUNTIES.	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 and Over.		Not Reported.		Total.
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Adams	6	57	144	108	38	16	9	1	4	4	.....	.....	2	.....	.....	.....	.....	17	203
Allen	10	127	505	490	155	67	33	26	20	14	5	.....	.....	.....	.....	.....	.....	4	728
Bartholomew	3	54	181	157	45	26	15	10	4	6	6	2	.....	.....	1	1	2	1	257
Benton	.....	18	79	74	19	7	.....	2	2	.....	.....	.....	.....	.....	.....	.....	1	.....	101
Blackford	1	75	162	120	42	10	7	6	1	3	3	.....	.....	.....	.....	.....	2	4	218
Boone	13	93	157	110	44	23	13	7	6	1	4	4	2	2	1	.....	.....	.....	240
Brown	2	11	17	16	12	8	4	4	3	.....	1	.....	.....	.....	.....	.....	38	38	77
Carroll	6	60	119	87	26	14	13	6	4	3	3	2	.....	.....	1	.....	.....	.....	172
Cass	4	86	226	181	55	43	23	8	13	7	4	1	1	.....	.....	.....	1	1	327
Clark	9	101	226	199	76	38	38	21	9	6	7	1	2	.....	.....	.....	79	80	446
Clay	13	97	217	212	88	33	25	11	11	2	2	1	.....	.....	.....	.....	.....	.....	356
Clinton	14	95	228	186	51	20	10	9	10	3	1	2	1	.....	.....	.....	1	1	316
Crawford	89	91	29	35	19	21	14	8	7	3	1	1	.....	.....	.....	.....	.....	.....	159
Daviess	10	74	163	142	51	13	17	7	2	3	3	1	1	1	.....	.....	11	17	258
Dearborn	3	39	161	164	55	26	9	8	8	2	4	1	.....	.....	.....	.....	1	1	241
Decatur	18	56	125	103	36	24	13	5	5	3	1	2	3	1	.....	.....	2	9	208
Dekalb	4	65	184	155	47	24	9	3	5	2	5	4	4	.....	.....	.....	.....	5	58
Delaware	19	163	397	313	89	60	39	27	18	6	10	4	.....	.....	.....	.....	2	1	574
Dubois	5	32	111	113	35	13	6	1	2	1	3	2	.....	.....	.....	.....	.....	.....	162
Elkhart	6	72	310	308	94	48	25	15	10	6	6	2	1	.....	.....	.....	.....	1	452
Fayette	3	32	96	74	21	21	6	2	3	2	.....	.....	2	.....	.....	.....	.....	.....	131
Floyd	7	43	171	178	60	35	26	14	8	2	1	4	2	.....	.....	.....	10	9	285
Fountain	6	63	166	151	60	29	16	7	2	2	1	.....	1	.....	.....	.....	.....	.....	252
Franklin	.....	26	77	73	30	15	10	5	1	2	4	2	1	.....	.....	.....	.....	.....	123
Fulton	4	36	124	105	21	15	8	7	2	2	5	5	3	.....	.....	.....	6	3	173

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TABLE D—Continued.

COUNTIES.	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 and Over.		Not Reported.		Total.
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Pulaski	3	43	86	63	22	9	4	5	6	1	.....	1	.....	.....	1	.....	.....	.....	122
Putnam	6	54	130	107	36	18	9	9	5	2	5	2	2	1	.....	.....	.....	.....	193
Randolph	20	96	190	132	36	21	19	11	10	7	7	3	1	1	.....	.....	4	16	227
Ripley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	184	184	184
Rush	5	38	110	95	35	28	12	7	5	2	2	.....	1	.....	.....	.....	.....	.....	170
Scott	5	24	34	21	5	3	4	2	2	1	2	1	.....	.....	.....	.....	.....	.....	52
Shelby	7	64	164	130	39	27	15	11	7	5	5	.....	.....	.....	.....	1	3	2	240
Spencer	4	61	157	132	40	16	12	10	4	2	4	1	1	.....	.....	.....	31	31	253
Starke	2	34	58	38	13	4	7	3	2	6	5	1	.....	.....	.....	.....	.....	1	57
Steuben	3	35	102	94	38	23	8	5	6	4	5	2	2	1	.....	.....	.....	.....	164
St. Joseph	8	99	428	419	102	51	37	28	18	11	7	3	4	1	1	.....	7	.....	612
Sullivan	4	94	210	124	36	37	18	14	2	2	3	2	.....	.....	.....	.....	.....	.....	273
Switzerland	3	28	67	46	16	20	7	2	1	1	2	.....	.....	.....	1	.....	.....	.....	97
Tippecanoe	4	57	206	202	66	36	17	8	10	5	1	2	1	.....	.....	.....	5	.....	310
Tipton	10	93	144	75	23	13	6	6	5	5	3	.....	3	1	.....	.....	.....	1	194
Union	.....	9	38	35	7	2	3	2	1	.....	.....	.....	.....	1	1	.....	3	4	53
Vanderburgh	13	127	170	543	464	44	52	16	21	5	9	.....	4	.....	.....	.....	6	4	739
Vermillion	3	41	81	62	26	16	8	3	4	.....	3	2	.....	.....	.....	.....	.....	1	125
Vigo	17	195	479	460	194	81	62	27	12	8	6	1	3	.....	.....	.....	.....	1	773
Wabash	9	61	188	162	49	27	14	16	7	1	2	2	.....	.....	.....	.....	.....	.....	269
Warren	3	28	60	49	14	3	4	2	.....	1	1	1	1	.....	.....	.....	1	2	84
Warrick	6	98	122	44	24	10	8	7	5	1	2	.....	.....	.....	.....	.....	4	11	171
Washington	10	65	110	70	21	13	9	2	4	6	2	1	1	.....	.....	.....	20	20	177
Wayne	6	68	256	237	68	38	24	16	6	8	9	1	1	1	2	.....	3	6	375
Wells	9	67	150	110	45	36	11	9	8	3	3	2	1	.....	.....	.....	.....	.....	227
White	1	45	134	109	29	12	5	3	3	5	3	.....	1	.....	.....	.....	.....	2	176
Whitley	4	30	122	106	25	16	3	4	3	2	.....	.....	.....	.....	1	.....	1	1	150
Total	723	6,517	16,173	13,916	4,888	2,436	1,467	855	645	341	327	137	114	22	15	5	625	748	24,977

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TABLE D—Continued.

COUNTIES.	Under 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 and Over.		Not Reported.		Total.
	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	Grooms.	Brides.	
Pulaski	3	42	86	63	23	9	4	5	6	1	.....	1	.....	.....	1	.....	.....	.....	122
Putnam	6	54	130	107	36	18	9	9	5	2	5	2	2	1	.....	.....	.....	.....	193
Randolph	20	96	190	132	36	21	19	11	10	7	7	3	1	1	.....	.....	4	16	257
Ripley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	184	184	184
Rush	5	38	110	95	35	28	12	7	5	2	2	.....	1	.....	.....	.....	.....	.....	170
Scott	5	24	34	21	5	3	4	2	2	1	2	1	.....	.....	.....	.....	.....	.....	52
Shelby	7	64	164	130	39	27	15	11	7	5	5	.....	.....	.....	.....	1	3	2	240
Spencer	4	61	157	132	40	16	12	10	4	2	4	1	1	.....	.....	.....	31	31	253
Starke	2	34	58	38	13	4	7	3	2	6	5	1	.....	.....	.....	.....	.....	1	87
Steuben	3	35	102	94	38	23	8	5	6	4	5	2	2	1	.....	.....	.....	.....	164
St. Joseph	8	99	428	419	102	51	37	28	18	11	7	3	4	1	1	.....	7	.....	612
Sullivan	4	94	210	124	36	37	18	14	2	2	3	2	.....	.....	.....	.....	.....	.....	273
Switzerland	3	28	67	46	16	20	7	2	1	1	2	.....	.....	.....	1	.....	.....	.....	97
Tippecanoe	4	57	206	202	66	36	17	8	10	5	1	2	1	.....	.....	.....	5	.....	310
Tipton	10	93	144	75	23	13	6	6	5	5	3	.....	3	1	.....	.....	.....	1	194
Union	.....	9	38	35	7	2	3	2	1	.....	.....	.....	.....	1	1	.....	3	4	53
Vanderburgh	13	127	170	543	464	44	52	16	21	5	9	.....	4	.....	.....	.....	6	4	739
Vermillion	3	41	81	62	26	16	8	3	4	.....	3	2	.....	.....	.....	.....	.....	1	125
Vigo	17	195	479	460	194	81	62	27	12	8	6	1	3	.....	.....	.....	.....	1	778
Wabash	9	61	188	162	49	27	14	16	7	1	2	2	.....	.....	.....	.....	.....	.....	269
Warren	3	26	60	49	14	3	4	2	.....	1	1	1	1	.....	.....	.....	1	2	84
Warrick	6	96	122	44	24	10	8	7	5	1	2	.....	.....	.....	.....	.....	4	11	171
Washington	10	65	110	70	21	13	9	2	4	6	2	1	1	.....	.....	.....	20	20	177
Wayne	6	68	256	237	68	38	24	16	6	8	9	1	1	1	2	.....	3	6	375
Wells	9	67	150	110	45	36	11	9	8	3	3	2	1	.....	.....	.....	.....	.....	227
White	1	45	134	109	29	12	5	3	3	5	3	.....	1	.....	.....	.....	.....	2	176
Whitley	4	30	122	106	25	16	3	4	3	2	.....	.....	.....	.....	1	.....	1	1	159
Total	723	6,517	16,173	13,916	4,888	2,436	1,467	855	645	341	327	137	114	22	15	5	625	748	24,977

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